

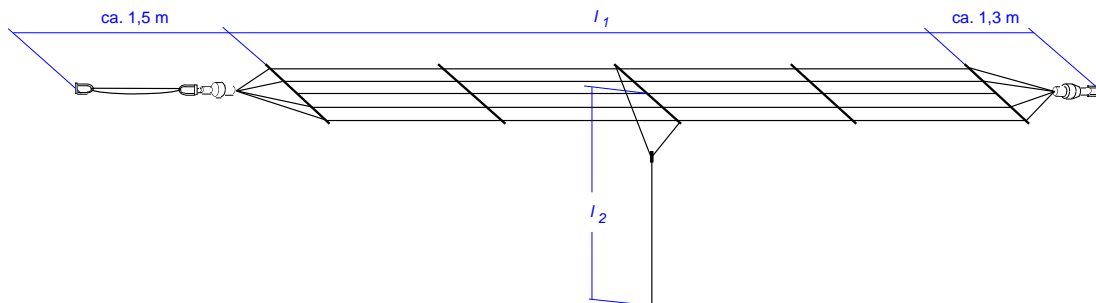
## Product Information

### Cage Antennas Series CA

Cage antennas are used for wideband short wave communication applications. They are applicable for transmission and reception needs. They are fed from aas.tech AAPG series broadband compensation networks or third-party antenna tuning units.

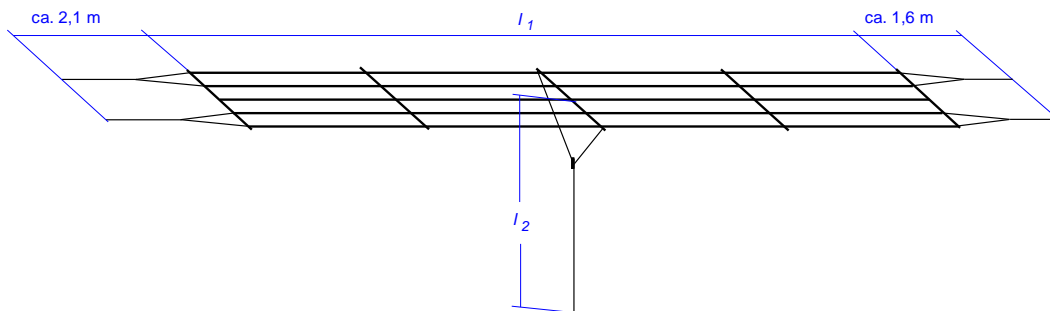
Depending on the compensation network used, an impedance of approximately 50  $\Omega$  is achieved over a wide frequency range without retuning.

#### CA 1 Series



CA 1/ $l_1/l_2$  with one-point suspension

#### CA 2 Series

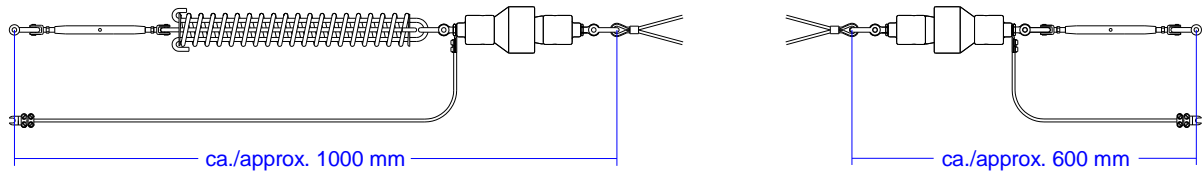


CA 2/ $l_1/l_2$  with two-point suspension

With the standard versions if  $l_1 \leq 15$  m, the antenna has three cage bridges, if  $l_1 \geq 15$  m and  $\leq 30$  m, it has five cage bridges.

Lead  $l_2$  can be connected to any cage bridge. The versions CA 2/ $l_1/l_2$  (two-point suspension) are recommended for installations on ships.

The antennas are fitted with shock absorber springs which act as a strain relief to protect the antenna against mechanical loads. Fine tuning allows the antenna to be adapted to the installation environment.



The antennas are made from materials resistant against corrosion and ultraviolet radiation to withstand the rough conditions at sea. Special strain insulators GT 300 (doc. PIG 030401) made from Teflon with fittings from stainless steel are used with our wire antennas.

Note the shown antennas are typical / exemplary configurations.

The antennas are manufactured according to customer specification and application need. Please contact us for further details and/or inquiries.

## General Technical Data

Parameter	Data
Application	Broadband transmit-receive antenna
Design	Wire cage antenna
Length $l_1$	typ. 20 ... 30m Consider a sag of 5% when defining the length.
Length $l_2$	typ. 10 ... 40m
Weight	typ. 50 kg – 100 kg (depends on design, lengths)
Frequency Range	1 ... 30 MHz Depending on matching device
Sag	typ. 5%
Permissible power acceptance	5 kW depending on the minimum operating frequency and the length of the antenna
Feeding connection	Clamping terminal for 8 mm bold
Antenna Wire	stainless steel 1.4401, V4A, AISI 316 (austenitic stainless steel)

Design and specification are subject to change without prior notice, errors excepted.  
 Data given without tolerance are typical values.

## Scope of Supply

Pos.	Description
1	Cage Antenna CA ...
2	USB stick with product documentation in pdf format

## Order Information

Type Designation	Part No. NSN	Remark
CA ...	20xx.xxxx.00 ---	Design and dimensions L1, L2 according to customer specification to allow adaption into the application environment

## Spare Parts

General list with typical spare parts used for aas.tech wire antennas.

Designation	Type	Part No.	Remark
Strain Insulator	GT 300	0006.0700.00	Doc. PIG 030401
Strain Relief Spring	Spring 1	0000.3801.01	stainless steel
Shackle	5/16"	AL.0066	stainless steel
Shackle	3/8"	AL.0067	stainless steel
Rope Clip	4-5 mm	AL.0088	stainless steel
Turnbuckle	M10 fork/fork	AL.0146	stainless steel
Turnbuckle	M8 fork/fork	AL.0163	stainless steel
Terminal Clamp	8 mm, closed	1972.0010.03	nickel plated
Terminal Clamp	8 mm, open	1904.1801.07	nickel plated
Thimble	5 mm	AL.0038	stainless steel
Wire Rope	7x19/5mm	KA.0041	stainless steel

## Associated Products

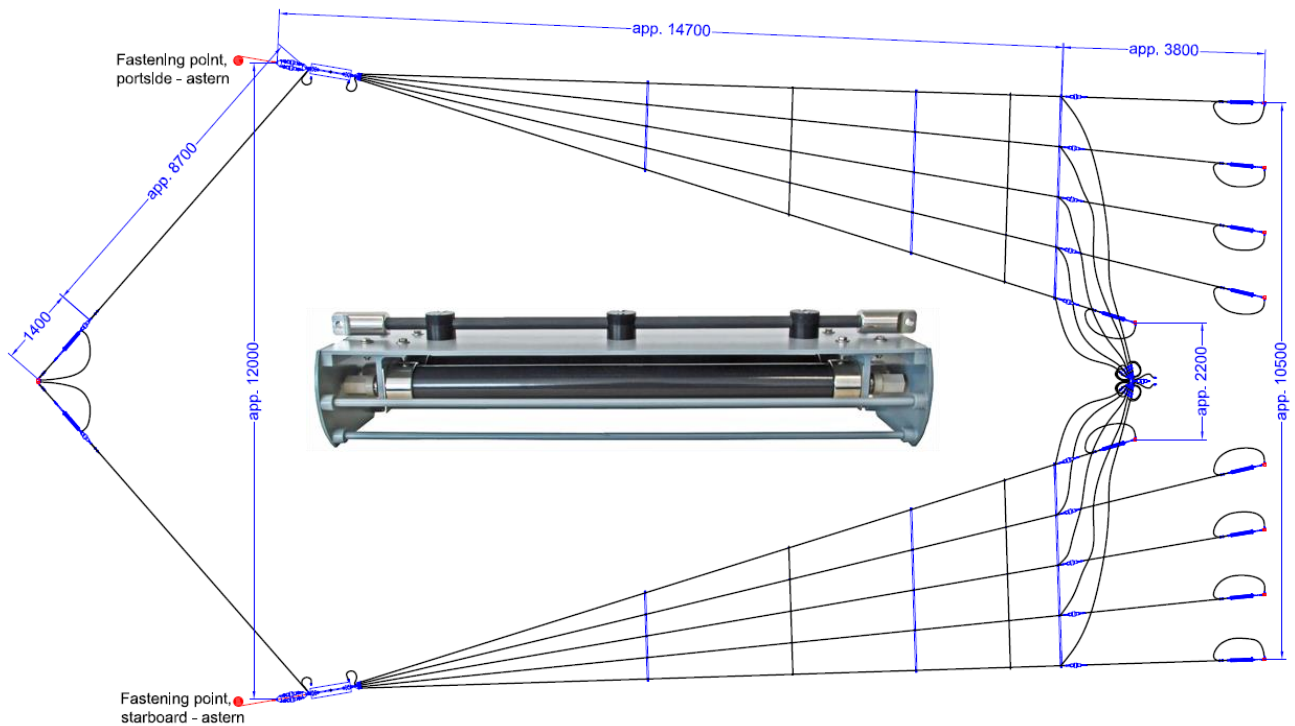
For integration into the application environment associated products are available.

Type Designation	Part No. NSN	Description
GT 300	0006.0700.00 5970-12-331-6717	Strain Insulator PIG 030401
EAU 60/240/II	0002.5203.00 5985-12-190-2099	Antenna Matching Transformer to improve the efficiency of a receiving antenna PIG 030402
ISO K35	0006.2000.00 ---	Lead Through Insulator PIG 030403
AAPG	20xx.xxxx.00	Broadband antenna matching unit to match the impedance of the antenna to a transmitter according to customer specification

## Cage Antenna

### CA WL30-BDA

The CA WL30-BDA is a project specific cage antenna applicable as transmit/receive antenna, used for short wave communication applications on board of a vessel. With a broadband antenna matching unit of the AAPG series an impedance of approximately 50 Ohm is achieved over a wide frequency range.



The antenna consists of two antenna wire assemblies arranged to a center line symmetrically with high power antenna attenuators (series BDGL). From each antenna wire assembly, a compensation wire leads to a common point fixed to the ship via an insulator in each compensation wire. The feeding of each antenna wire assemblies is realized by five feeding lines fixed near the matching unit. A short wire connects these to the matching unit.

The antenna is fitted with shock absorber springs which act as a strain relief to protect the antenna against mechanical loads. Fine tuning allows the antenna to be adapted to the installation environment.

The antenna provides adjustable clamps to allow flexibility in the installation environment.

All materials used are resistant against corrosion and ultraviolet radiation to withstand the rough conditions at sea.