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BAHAMA®
LARGO

– Made in Germany –

Standard production line of collapsible architectural (inverted-profile) high-performance umbrella structures.

– Designed & warranted to withstand wind/peak gust velocity ***up to 130 km/h***[A] *(81 mph or 70 kts), when in OPEN configuration –* ***N O T*** *, however, to any snow load no matter how slight (pls refer to the illustrated »LARGO_GB_Closg.&Securg._2012-13« instructions).*

[A] **This definition applying to winds or gusts vectoring more or less horizontally, not to incalculable uplifts in rotors as typical of hurricanes/tornados (cyclones) travelling through.**

– Suitable for permanent in-ground/concrete footing (self-draining) o n l y .

Standard production models:

In '**ROUND**' canopy shape:	**Ø 7.5 m**	**Ø 8.5 m**
Effective ground coverage*:	***42 m²***	***54 m²***
Arithmetic ground coverage:	[44.2 m²]	[56.7 m²]
In **SQUARE** canopy shape:	**☐ 7 x 7 m**[B]	**☐ 8 x 8 m**[B]
Effective ground coverage*:	***47 m²***	***62 m²***
Arithmetic ground coverage:	[49 m²]	[64 m²]

* **Resulting from vertically projected actual (not arithmetic) canopy edge contours as given upon unfolding and pre-tensioning.**

[B] **For reasons of structural stability & redundancy, plan view of these models showing 4 slightly truncated (diagonal twin-ribs) corner sections.**

Supply scope per unit including:

- *Ready-to-erect LARGO unit factory-equipped with ready-to-connect concealed (inner)* ***230/240V*** *[120/130V]* ***AC Lighting*** *comprising of 16 energy-saving BaHaMa® lamps at ea. 11W = 176W. Resulting collective candlelight power = approx. 1,000 watts, collective power consumption = approx. 0.18 kW per operational hour; one »External Control Unit« [ECU] with built-in ON/OFF + automatic safety switch ("Fi") forming part of the equipment.*
- *The (1 pc.) factory-preassembled, approx. 180 kg [397 lb] weighing Underground* ***Footing & Drainage Console*** *# L2451-0601E ready to be cast in on site in compliance with manufacturer's foundation drawing coming with. Console suitable to either connect to any existing underground sewer system or to seep away rainwater (underneath the concrete foundation body) into the ground.*
- *The (1 pc.)* ***Reusable Protective Cover*** *made of same fabric same colour shade as for the LARGO's membrane; said cover tailored to fit the closed, reefed & presecured shape of the selected LARGO model & equipped with a vertical technical-type zipper [see manufacturer's illustrated »LARGO_GB_Closg.&Securg._2012-13« instructions for respective handling & maintenance details].*
- *Model-related special* ***Transport Packing & Securing*** *(materials and man work) according to the latest stringent EU regulations concerning ex-factory shipping manufacturers' cargo stowing & securing on board 40ft open-top road/sea containers or other equivalent open-top transport containments such as of trucks.*

Design and Function:

Telescopic one-pole standing umbrella-like architectural fabric structure with a collapsible superstructure based on structural compressional (arms & stretchers) and tensional (fabric membrane) members. Its monument-like sculptured shape in open configuration results from a carefully tuned combined function between the fabric membrane with its minimum 96 arcuated-cut fabric segments and the fully unfolded frame comprising inter alia of each 16 major arms and stretchers. Prestraining loads necessary to stiffen the fabric structure and to give it the characteristicly sculptured shape when open are induced into, and primarily borne by, the 16 radial (major sectional) fabric joints on one and the 16 uppermost peripheral, slightly curved armed fabric edges on the other hand. Whilst the arms are linked to the »upper carriage« (sliding on pole) in double-shear bearings, stretchers with one end each are linked to the top section of the inner moving pole, with their other end to the arms, being applied to the predetermined pression centre within latters' overall length. Close to its top the inner pole is equipped with a fourfold heavy-duty mechanical device that engages during the final phase of the inner pole's retracting into the major pole – equivalent to the unfolding/prestraining procedure – so to ensure that the open superstructure is protected from

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damaging torsion when exposed to strong winds acting on it**.** With the opposite procedure – equivalent to the closing/refolding procedure, the inner pole extends out of the major pole thus relaxing and closing the superstructure**.** The »lower carriage« – its on-pole sliding range is intentionally very limited – has a stress-adjusting/controlling and locking function**:** Since the funnel-like bottom collar of the fabric membrane is fixed to it permanent, it prevents the textile membrane from escaping up when getting under growing stresses during the unfolding procedure**.** The so-called splashwater(-preventing) cowling – covering the major standing pole below the bottom end of the open (and closed) superstructure – consists of two slidable cylindrical half-shells that partly overlap each other laterally when in closed & locked condition, in which the cowling ensures splash-free rainwater drainage (through the major pole's special installation console) right into the underground sewer system**.** When unlocked and opened, the half-shells allow direct access to the major pole and thus to its built-in operating and maintenance devices [for operational details please refer to the manufacturer's illustrated »LARGO_GB_Closg.& Securg._2012-13« instructions]**.**

Drive for Opening & Closing:

Major pole-contained metal-encapsulated (maintenance-free) reduction gear for manual cranking with a custom handle**.** A buttress-type spindle fixed to the output shaft of the gear retracts the inner pole back into the major standing pole to open/unfold & prestress, and extends it out of the major pole to close/refold the superstruc-ture**.** The factory-predetermined & -adjusted (amount of) target prestress is displayed by a horizontal-line mark on the major pole**.** Maintenance is confined to lubricating the buttress-type spindle once a year [for particulars of both operation and maintenance procedures please refer to the manufacturer's illustrated »LARGO_GB_Closg.&Securg._2012-13« instructions]**.**

Materials:

Major pole:	Inside & outside functionally chambered extruded aluminium, Ø 220 x 10 mm
Inner pole:	Inside & outside functionally chambered extruded aluminium, Ø 130 x 6 mm
Arms:	Functionally chambered extruded aluminium, 42 x 26 x 3 mm
Binding beams:	Extruded aluminium, 42 x 26 x 3 mm and 54 x 38 x 4 mm
Stretchers:	Functionally chambered extruded aluminium, 42 x 26 x 3 mm
Bearings:	Double-shear, U-shaped extruded aluminium profile
Carriages:	Seamless drawn tubular aluminium, Ø 303 x 18 mm
Footing console:	Structural steel, H-T hot-dipped
Installation console:	Structural steel, H-T hot-dipped, additionally PES/RAL-powder-coated & baked
Buttress spindle:	C15 machine-type steel, 36 x 6 mm
Spindle bearing:	Block made of high-tenacity molybdenous-type synthetic resin
Lubricant:	Spindle grease
Gear box:	Alu- & steel-encapsulated & sealed (factory-lubricated)
Slider bearings:	High-tenacity molybdenous-type synthetic resin
Axle bolts:	Standard V2A stainless steel, except if with »maritime« option**:** V4A/off-shore st. steel
Assembling screws:	Standard V2A stainless steel, except if with »maritime« option**:** V4A/off-shore st. steel
Functional parts:	Standard V2A stainless steel, except if with »maritime« option**:** V4A/off-shore st. steel
Half-shells/cowling:	1.2 mm thick aluminium sheet; fixed handles**:** solid aluminium
Fabric material:	Polyester fabric *»betex®09«*, inside (the "funnel") acrylate-coated; texture**:** basket weave ("Panama"), weight**:** approx. 310 g/m^2, LARGO-associated standard colour shades**:** # 9577/white-translucent and # 9823/écru-translucent. Other colour shades on request.
Fabric/prot. cover:	Same as for the membrane; colour shades**:** Same as for the membrane
Crank handle:	Solid V2A stainless steel material, custom make (fitting both gear speeds)
Spiral strap/securing:	heavy-duty 80-mm wide polyester webbing, natural white (écru)

Surface Finish:

Surfaces of all aluminium components are preconditioned, thereafter PES/RAL-powder-coated & baked at >190° C, e x c e p t i o n s **:** • Half-shells of the splashwater cowling are finished the said way on either side of the sheet aluminium; • (pole-receiving) Installation Console**:** Double-process treatment as stated herein above**.**

Erection / Dead Weights:

Relative to the selected model**:** Approx. 900 through 1,200 kg including each the Installation Console (the one connecting to the in-ground/concrete drainage console) which always comes factory-premounted onto the major pole.

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