

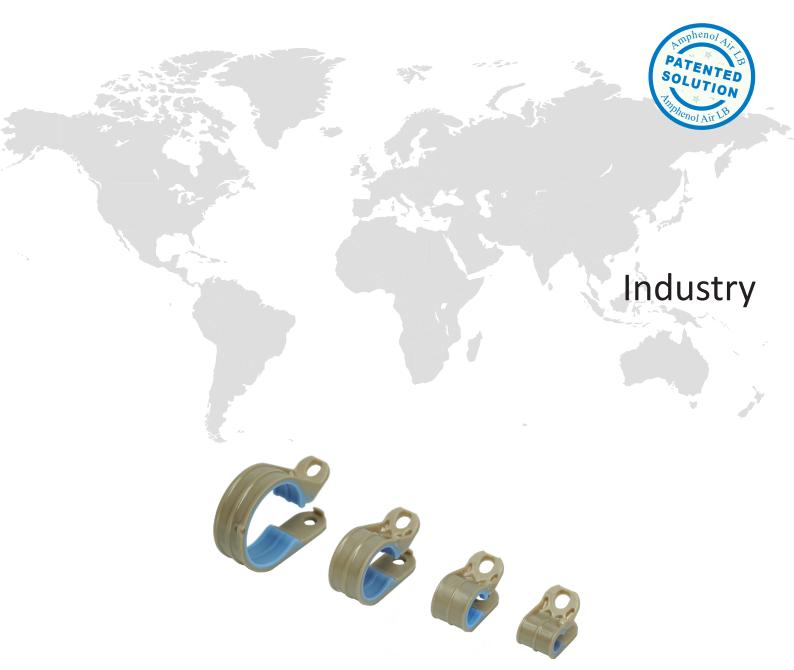
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# LB Clamps

The Light Blue Clamps: Alternative to metallic attachment system







BROCHURE 01/23 - V2.0





# **PRESENTATION**

LB Clamps series is a lightweight version of the metallic Cable Clamps series with

an important weight saving.

WEIGHT SAVING
UP TO 73%!

They are designed to keep the cable harnesses or hydraulic pipes securely maintained on structure.

They have an integrated prelocking system which allows to preposition the clamp on the harness.

The screw (not supplied) allows to lock the clamp and fix it on structure in one operation

TIME SAVING

LB Clamps absorb shocks and vibrations, and offer an unequalled protection of bundles and pipes-against pinching, crushing or mechanical wear. The silicone cushion limits noise pollution from

structures by absorbing vibrations and separating the pipes from the wall.

RELIABILITY

They are suited for applications in harsh environment and temperatures up to 225°C. -

HIGH TEMPERATURE

Thanks to their design, it is possible to stack them whatever their size.

They are available in 10 sizes, for bundles or pipes diameters from 5 to 25,4 mm.

#### CLAMP RANGE

10 sizes available

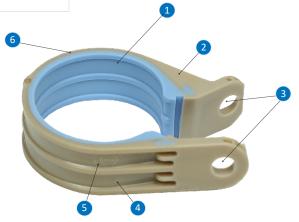
Size	04	06	08	10	12	14	18	21	22	29	
Bundle / Pipe diameter	5	6,3	8	9,5	11	12,7	15,9	18	19	25,4	
Tolerance		± 0,5									

#### ■ REACH AND ROHS

In accordance with the REACH spec. In accordance with the RoHS spec.

#### CAPTION

- 1 Silicone cushion
- 2 Clamp band
- 3 Fixing Ø 5,2 mm
- 4 P/N engraved
- 5 Date code
- 6 Clamp size engraved



# MAIN TECHNICAL FEATURES

#### MATERIAL

Clamp band : Thermoplastic
Cushion : Silicone elastomer

#### **■ ENVIRONMENTAL**

Operating temperature : -55° to +225°C permanent

Solar radiation : suitable for outdoor use (56 days of exposure according to procedure II level A1 of the MIL STD 810

G method 505.5 test standard)

## ■ ELECTRICAL (as per RTCA DO 160G standard)

Insulation resistance : >  $10^6 M\Omega$ 

## **■ FLAMMABILITY / SMOKE / TOXICITY**

UL94 : UL94 V0 for 1,5 mm (Thermoplastic)

UL94 HB for 3 mm (Silicone elastomer)

#### ■ FLUIDS RESISTANCE (as per RTCA DO 160G standard)

Spray tests: fuels, hydraulic fluids, lubrication oils, solvent and cleaning fluids, de-icing fluids, insecticides

# ■ MECHANICAL (as per RTCA DO 160G standard)

Shocks : 6g during 20 ms

Vibrations : 3 H per axis, resonance frequency > 30 Hz

Windmilling test: 6g, frequency 2,9 to 30 Hz

Load test: depending on the clamp size, in 4 directions Nose wheel imbalance: 3,5 to 10g, frequency 5 to 27 Hz

#### ■ MOUNTING (as per RTCA DO 160G standard)

Closure and fixing : Screw / washer Ø 5,2 mm
Screw (recommended) : .1900-32UNJF or NSA5191-3 or M5
Washer (recommended) : NAS1149D0332J or for M5 screw

Tightening torque : 4,2 Nm

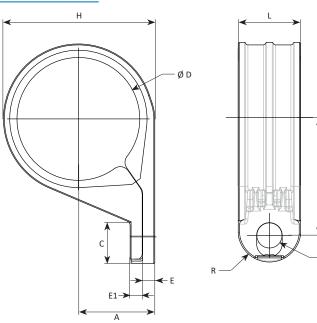
Clamp opening : 90° maximum recommended

# **■** WEIGHTS

Size	04	06	08	10	12	14	18	21	22	29
Weight of LB Clamps (g)	1,40	1,55	1,75	1,95	2,25	2,55	3,15	3,45	3,65	4,90
Weight of metallic clamps (g)	4,60	5,50	6,30	7,10	7,80	8,90	10,60	11,90	12,40	15,50
Weight saved	-70%	-72%	-72%	-73%	-71%	-71%	-70%	-71%	-71%	-68%

# PART NUMBERS & DIMENSIONS

# **■ TECHNICAL DRAWINGS**





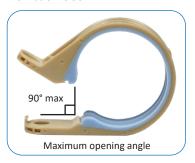
# ■ PART NUMBERS AND DIMENSIONS

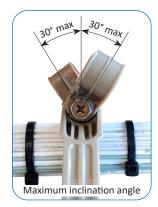
Part Number Clamp LB Clamps size	Bundle / Pipe diameter ØD		А		K		С	E	E1	R	L	Ød	H (for information)		
	size	mm	tolerance	mm	tolerance	mm	tolerance	mm	mm	mm	mm	mm	mm	mm	tolerance
CC5516C04L	04	5	± 0,5	5,8	± 0,3	12,6			2	2	6,5 ±0,2	13,1 maxi	5,2	10,8	± 0,5
CC5516C06L	06	6,3		6,6		13,4								12,275	
CC5516C08L	08	8		7,3		14,1								13,8	
CC5516C10L	10	9,5		8,1		14,9								15,35	
CC5516C12L	12	11		8,8		15,6	± 0,5	8,5						16,8	
CC5516C14L	14	12,7		9,8	± 0,5	16,6								18,85	
CC5516C18L	18	15,9		11,3		19,9			2,5	2,5				21,95	
CC5516C21L	21	18		12,3		20,9								24	
CC5516C22L	22	19		12,8		21,3								25	
CC5516C29L	29	25,4		15,8		24,4								31,3	± 0,8

# **IMPLEMENTATION**

#### **■ RECOMMENDATIONS**

Regarding the insertion of cable bundles or hydraulic pipes inside the LB Clamps, Amphenol Air LB France recommend a maximum opening angle of  $90^\circ$ . When stacking multiple clamps, the maximum angle of inclination is  $30^\circ$ .





LB Clamps are closed and fixed on structure, in one operation, using a screw and a washer (not supplied) matching the diameter of the fixing hole (5,2 mm). Amphenol Air LB France recommend to use the following hardware:

- Screw: .1900-32UNJF or NSA5191-3 or M5 - Washer: NAS1149D0332J or for M5 screw

Tightening torque recommended: 4,2 Nm



# **■ IMPLEMENTATION INSTRUCTIONS**

#### Mounting:

1 Prepositioning of clamps on cable bundles and prelocking. Even prelocked, it is possible to adjust the position of clamps by sliding along the bundle.

2 Locking and fixing on structure with screw and washer in one operation.





#### Unmounting:

1 After unscrewing, unlocking the clamp by light pressure along the axis below.



