

TECHNOLOGY FOR WATCH MAKING

DLC & Superior coatings for watch components



ARGOR-ALJBA

DLC & Superior coatings 






ENVIRONMENTAL ADVANTAGES

Discover the environmental advantages of DLC coatings



We pay considerable attention to environmental sustainability.

Nanocoatings are a very viable solution in many application fields to reduce the use of production resources; together with our customers, we innovate to improve productivity, reduce costs and environmental impact

-  **100% biocompatible**
-  **Environmentally friendly**
-  **Free of heavy metals**
-  **Hypoallergenic**
-  **It works at a low temperature while maintaining the elasticity and flexibility of the piece**



WHAT ARE ta-C DLC COATINGS

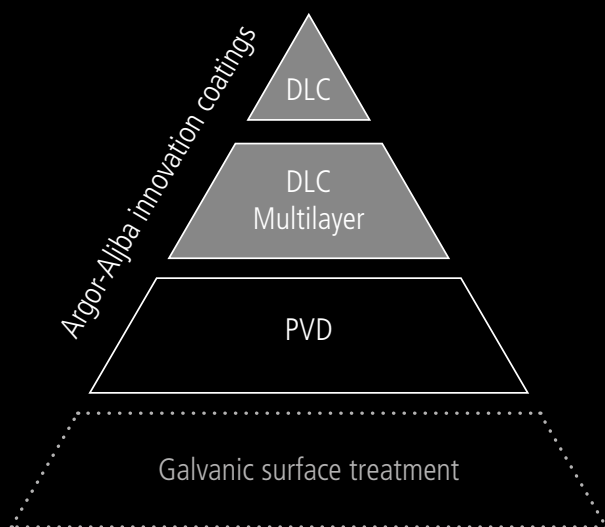


Argor-Aljba's ta-C DLC coatings, due to their tetrahedral structure, acquire the properties of a diamond. The share of the sp³-configured carbon lies around 75-85%, which is the reason for the high content of diamond structure. Furthermore, due to its procedure, Argor-Aljba's ta-C coatings are completely free of hydrogen.

The thereby obtained structure endows the coatings with the following properties:

- Very high hardness up to 5000 HV
- High wear resistance
- Very low friction coefficient
- Perfect adherence, thanks to a special intermediate layer
- Inalterable with moisture
- 100% skin contact compatibility
- Chemical stability and corrosion resistance

Through these properties, Argor-Aljba's coatings clearly distinguish themselves from conventional coatings. The considerably reduced friction and extreme hardness greatly increase performance, as well as the service life of components and accessories, compared to conventional coatings.



light-greyZ Light grey

brownZ Bronze

With Light-greyZ and BrownZ the world of luxury and fashion comes into a new aesthetic and technical dimension



Technical features

- Type of coatings: **multilayer arcDLC + PVD + PACVD**
- Hardness last layer: between **1500 HV and 2000 HV**
- **Excellent adhesion on brass, stainless steel and titanium alloy** components
- **Very high homogeneity** of the coating
- Possibility of property adjustment based on specific request
- **Colour customisation**
- **Excellent resistance to UV rays**

Coating	Light-GreyZ	BrownZ
Type of coating	Multilayer DLC System	Multilayer DLC System
Process	PACVD	PACVD
Temperature of deposition [°C]	<300	<350
Color	light grey	bronze
Thickness [µm]	1-2	1-2
Hardness HV 0.05	1800-2300	1800-2300

dianoir[®] Anthracite

dianoir[®] G4 Deep black

Highest aesthetical requirements combined with superior properties regarding scratch and wear resistance




Technical features

- The corrosion and high wear resistance of dianoir[®] allows the **use in challenging environmental conditions**.
- The **non-toxic process** and the **biological compatibility** are optimal properties to use dianoir[®] and dianoir[®] G4 in contact with skin
- **Perfect adhesion**, thanks to a special intermediate layer
- **100% Swiss Made**: dianoir[®] is made completely in Switzerland with a patented Swiss coating process.
- **Excellent resistance to UV rays**
- **Dianoir G4** multilayer arcDLC + PVD + PACVD coating
- Possibility of property adjustment based on specific request

Coating	dianoir [®]	dianoir [®] G4
Type of coating	ta-C	a-C:H
Process	PVD Arc	PVD Arc + PACVD
Temperature of deposition [°C]	<100	<190
Color	anthracite	deep black
Thickness [µm]	1	2-3
Hardness HV 0.05	4500	800-1500



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Switzerland
Via F. Borromini 20, CH-6850 Mendrisio
Tel +41 91 222 83 59, Fax +41 91 646 46 60
info@argor-aljaba.com
www.argor-aljaba.com