

NanoARC^{master} 650SP for application of coatings

Application

The unit is design for application of solid lubricating antifriction coatings on the liners of the sliding bearings of internal combustion engines, as well as heat-resistant coatings on the blades of gas turbine plants and jet engines, antifriction coatings based on molybdenum and tungsten disulfides, as well as other types of coatings on machine parts and cutting tools by the method of high-speed magnetron sputtering.

Advantages

High quality of coatings. The unit makes it possible to increase wear-resistance of sliding bearings, equipment parts and tools, as well as heat-resistance of blades of gas turbine plants and jet engines, and accordingly extend their service life at a reasonable cost of the unit.

Forms of cooperation

Supply of a standard ready-made product, design, manufacturing and supply of a customized product.

Vacuum coatings are widely applied in different spheres of life, for example: medicine (coatings on titanium implants), petrochemical sector (various stop valves), aircraft engineering (heat-resistant coating of turbine blades), shipbuilding (anti-cavitation coating of propellers), military equipment, instrumentation engineering etc. Depending on the requirements to a particular item and operation conditions we can apply any protective coating.



Main parameters*

Parameter	Value	Note
Thickness of applied coating, μm	Up to 50	
Coating hardness, N/mm^2	20000-38000	
Chamber inner dimensions, $L \times W \times H$, mm	650×650×900	Chamber shape- vertical hexagon
No. of sputter guns, pcs.	2-4	Unbalanced magnet systems
Sizes of sputtering targets $L \times W \times H$, mm	700×130×10	
Sputter gun supply power, KW	18	Current, voltage, capacity stabilization. Possibility to work in pulse mode
Bias feeder, V/A	1200/18	
Ultimate vacuum, Pa	1.33×10^{-3}	
Vacuum pumping to ultimate vacuum speed, min	30	
No. of gas puffing channels, pcs.	2	3 as option
Heater power, KW	24	
Control/ visualization	Automatic / LCD touch screen monitor 19"	
Visualization	Video camera	Displaying the image on the monitor
Installed power requirement, KW	90	3ph. ×380V+N, 50/60Hz
Hot/cold water flow rate, l/min	25/40	
Thermostated water flow rate, l/min	25	
Compressed air, MPa	0.4-0.6	

* The manufacturer may make the equipment design adjustment that does not impair the operational and service properties.