



# Magnetron sputtering unit NIKA-135



This unit is based on the NIKA-2013 vacuum station series. Pumping equipment: cryogenic pump NVK-200 and foreline pump - ISP-500C.

Technological devices (on the rear flange):  
4 magnetrons;  
1 ion source;  
2 heaters.

On the front flange on the cooled rotation input there are installed:

drum with carriers (8 plates 48 x 60), total load - 102 plates; drum with flaps; temperature measurement and thickness control systems by witness.

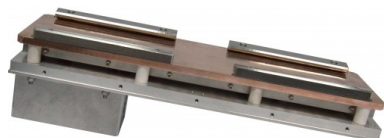
The unit is supplied with:

2 sets of removable carriers (1 set - 17 carriers);  
replaceable protective screens of the camera; automatic circulating water supply system (SOVA).

All processes are automated. Management, control of processes from the touch panel of the computer. The cycle of preliminary cleaning of spraying of 4 materials (with control of thickness by witness and temperature) is performed automatically.



**IBS-400** - Ion source - 1 pc.



**M400** - Magnetron - 3 pc.



**M250** - Magnetron - 1 pc.

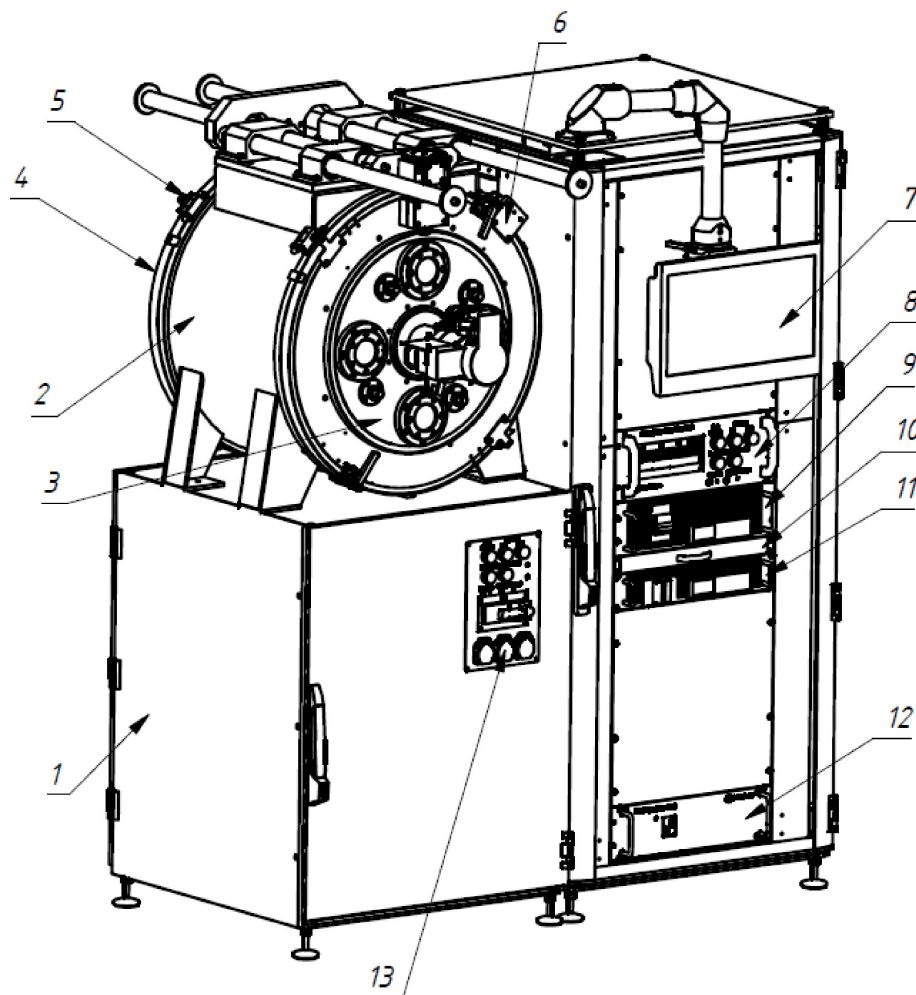
#### Parameters

Power	17 kW
Supply voltage	380V +10-15 %
Time to reach working vacuum	not more than 2 h.
Number of gas injection channels	3
Maximum current consumption by phase	32 A
Mass	no more than 900 kg
Service area (length x width)	4100 x 5500 mm
Ultimate vacuum	no more than $3 \times 10^{-4}$ Pa
Working vacuum	$2 \times 10^{-3}$ Pa
Working gases :	Ar, N <sub>2</sub> , O <sub>2</sub> , air
Overall dimensions (length x width x height) mm	1618 x 1415 x 2053



**L200** - Heater- 2 шт.

# Magnetron sputtering unit NIKA-135 Layout



- 1 - frame with a vacuum unit;
- 2 - vacuum chamber;
- 3 - drum flange;
- 4 - flange of technological devices;
- 5 - limit switch;
- 6 - flange locking electromagnet;
- 7 - monitor;
- 8 - vacuum system control unit;
- 9 - power supply unit for magnetrons;
- 10 - shelf with keyboard;
- 11 - power supply unit of the ion source;
- 12 - water distribution unit;
- 13 - control panel.