

Small-sized unit for magnetron sputtering NIKA-138

Vacuum unit for magnetron sputtering of 3 materials on substrates 48 x 60 and 48 x 30 mm with control of the deposition thickness.

Basic platform - vacuum station NIKA 12-500. Chamber Ø500 x 450 mm, water-cooled, equipped with 3 viewing windows. A single integrated rack contains a vacuum chamber, dry vacuum pumping devices (NVK-160) and control units, power supply of technological devices.

Behind the dimensions of the installation are located: FVN (NVSp) and a cryopump compressor (NVK), an automatic circulating water supply system (SOVA).

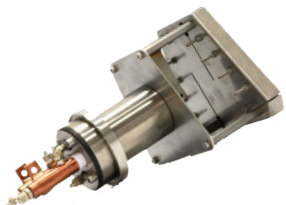
Set of technological devices :

- Sector heater - 1 pc;
- Ion source IBS-145 1 pc;
- Magnetron-100K - 3 pcs;
- Resistance witness
- Temperature sensor





IBS-145 Ion Source – 1pc.



Sector Heater -1pc.

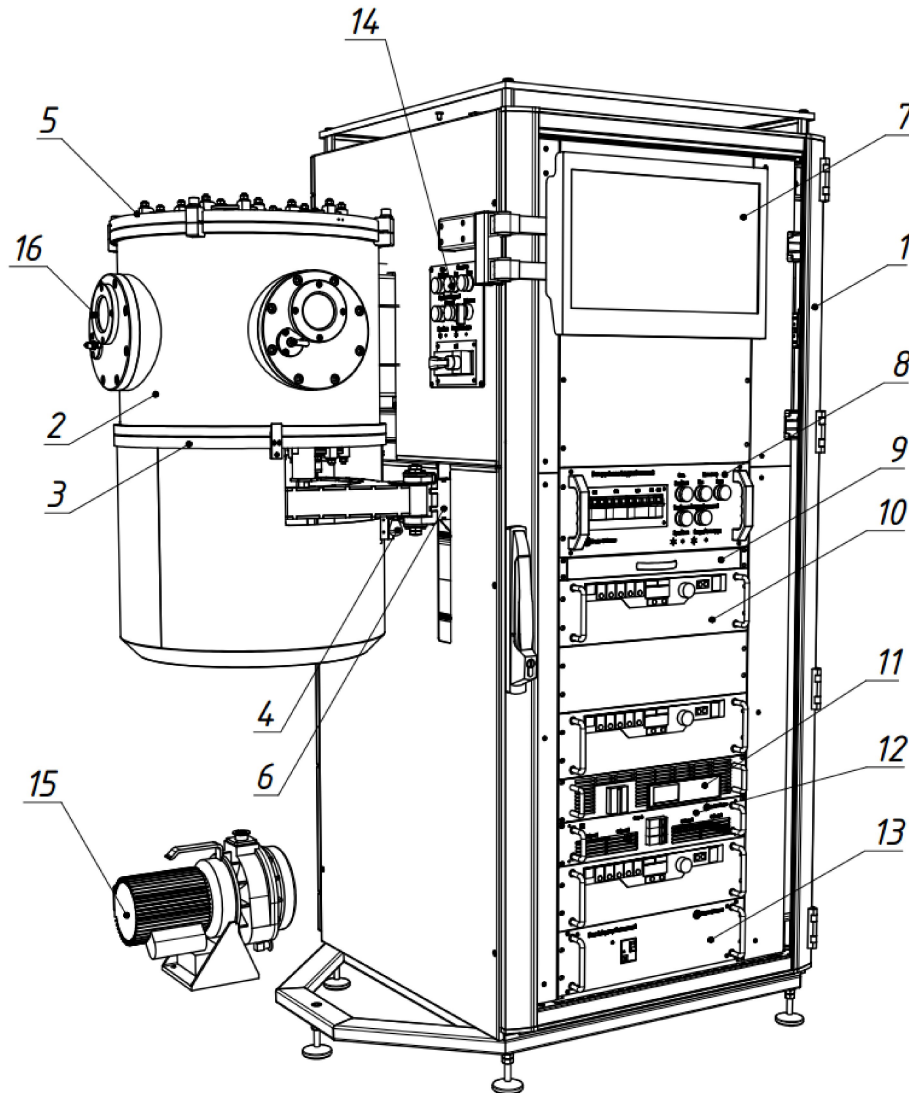


Magnetron -100K -
3 pcs.

Параметры

Power	22 kW
Supply voltage	380V +10-15 %
Connection to the network	TN-S
Ultimate vacuum	no more than 3×10^{-4} Pa
Working vacuum	no more than 5×10^{-3} Па
Time to reach ultimate vacuum	no more than 2 h.
Time to reach working vacuum	no more than 10 мин
Number of gas injection channels	3
Working gases	Ar
Maximum current consumption by phase	32A
Coolant needed	no more than 12l
Coolant	ethyl alcohol
Weight without compressor unit and foreline pump	no more than 800 kg

NIKA-138 unit Components



- 1 - frame;
- 2 - vacuum chamber;
- 3 - bottom flange;
- 4 - retainer;
- 5 - upper flange;
- 6 - lift;
- 7 - monitor;
- 8 - vacuum system control unit (BUVS);
- 9 - shelf with keyboard;
- 10 - power supply units for magnetrons (3 pcs.);
- 11 - ion source power supply unit (BPII);
- 12 - heater power supply unit;
- 13 - water distribution unit (BVR);
- 14 - control panel;
- 15 - foreline pump;
- 16 - viewing window (3 pcs.).

NIKA-138 unit Layout

