



**SCIENTIFIC-PRODUCTION  
ENTERPRISE VIBROBIT LLC**

26.51.66.133

**STAND SP33**

**Passport**

**VSPA.421412.161 PS**

Rostov-on-Don  
2020

**SPE VIBROBIT LLC**

Address: 344092, Russia, Rostov-On-Don, Kapustina St, 8, building A (PO Box №53)

Tel./Fax: +7 863 2182475, +7 863 2182478

E-mail: [info@vibrobit.ru](mailto:info@vibrobit.ru)

<http://www.vibrobit.ru>

The enterprise VIBROBIT reserves the right to modify parts and accessories without loss of product performance.

## 1 General information

Stand SP33 is designed to simulate the rotation and vibration of the shafts of rotating mechanisms when testing performance and assessing the sensitivity of tachometers with eddy current sensors, Hall effect sensors, eddy current vibration meters.

## 2 Technical characteristics

Table 1 - Technical characteristics

The parameter name	Normal value
The specified speed range, rpm	0 — 250
Vibration displacement swing, $\mu\text{m}$	400 $\pm$ 40
Number of teeth of the disc, pcs	36
Number of grooves on the disk plane	1
Dimensions "groove" (HxWxD), mm	14x10x2.8
Dimensions of "gear" (HxWxD), mm	15x4x2.5
Diameter of sensors of the tachometer, mm	10; 20
Diameter of sensors of vibration displacement, mm	10
Mass, kg, not exceeding	1.3
Overall dimensions, mm, not exceeding	67x134x94

## 3 Information on the content of precious materials and non-ferrous metals

The product of precious materials and non-ferrous metals to be recorded does not contain.

## 4 Completeness

Table 2 - Completeness

Designation	Name	Quantity	Note
VSPA.421412.161	Stand SP33	1	
VSPA.421412.161 PS	Stand SP33. Passport	1	

## 5 Operation and description

### Description of the design

The appearance of the stand is shown in Figure 1.

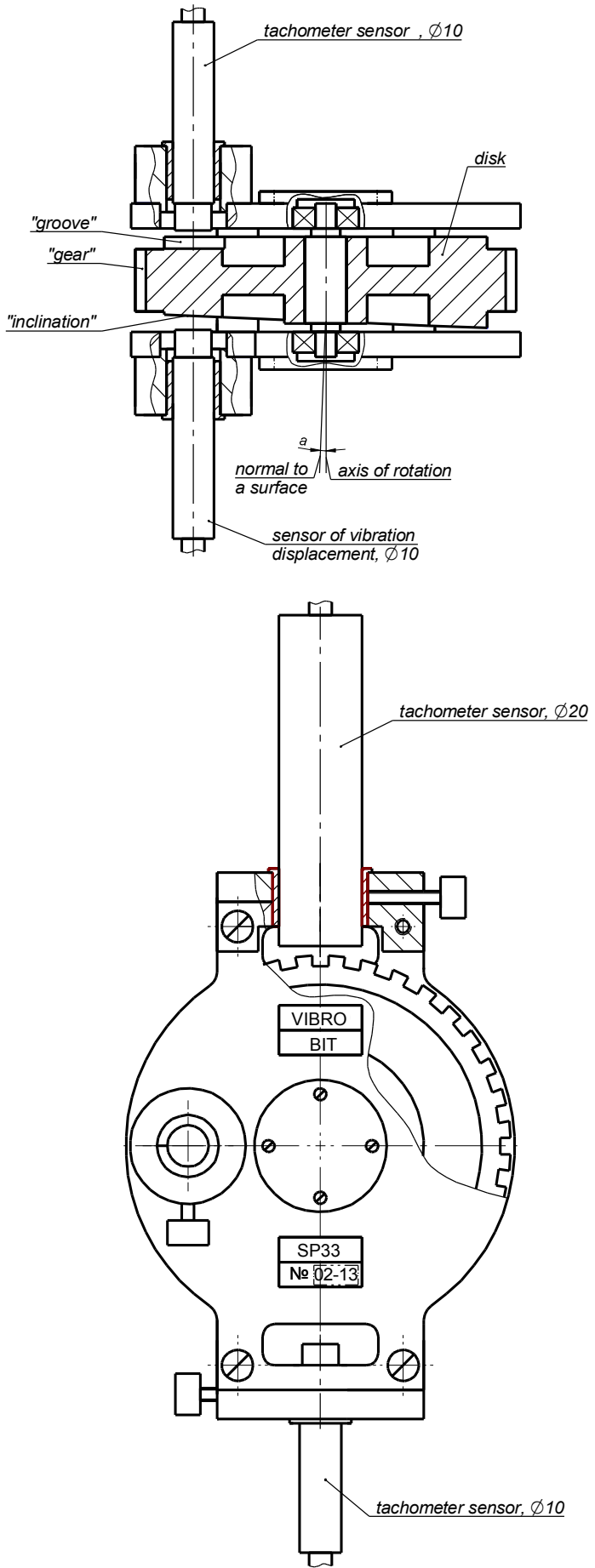


Figure 1

The main part of the stand is a metal disk mounted on a shaft rotating in bearings.

The disk has three control surfaces:

- "groove" located on the projecting concentric surface of the first plane;
- "gear", located on the cylindrical surface of the disk;
- "slope" - the entire second plane, beveled at an angle  $\alpha$ .

Sensors are installed through adapter sleeves and clamped with screws.

The tachometer sensors are installed to the "groove", "gear" control surfaces, and the vibration displacement sensor - to the "inclination" control surface.

### **Operating principle**

The impulse for rotation is created manually.

When passing "groove" ("gear") of a check surface of an axis of the sensor of the tachometer voltage impulse is formed.

Vibration displacement is created by rotating the disk in which the surface normal the "inclination" and the axis of rotation are disposed to each other at an angle  $\alpha$ .

## **6 Storage and transportation**

The stand in the package can withstand transportation over any distance by road and rail (in closed vehicles), water transport (in the holds of ships), and air transport (in sealed compartments).

Transportation conditions - J according to GOST 25804.4–83.

Stand in the package withstands the following transport factors:

- temperatures from minus 50 ° C to plus 50 ° C;
- relative humidity of 95% at 35 ° C;
- vibrations (acting along three mutually perpendicular axes of the container) during transportation by railway, motor transport and aircraft in the frequency range (10 - 55) Hz with a vibration displacement amplitude of 0.35 mm and vibration acceleration 5g;
- impacts with a peak impact acceleration value of 10g, shock pulse duration 10 ms, number of impacts (1000 ± 10) in the direction indicated on the packaging.

Storage of the stand in terms of the impact of environmental climatic factors must comply with conditions 3 (J3) according to GOST 15150–69. The shelf life of not more than 24 months from the date of manufacture.

Long-term storage of the stand is carried out in a package, in heated rooms with conditions 1 (L) according to GOST 15150–69.

## **7 Warranty**

The manufacturer guarantees the compliance of the stand with the technical characteristics provided the consumer observes the conditions of transportation, storage and operation.

The warranty period is 24 months from the date of commissioning, but not more than 48 months from the date of manufacture.

In the case of sending a stand for repair, the manufacturer should indicate the identified malfunction.

**8 Certificate packing**

The SP33 stand serial number \_\_\_\_\_ packed at the factory in accordance with the requirements of the existing technical documentation on it.

----- post	----- personal signature	----- full name
----- year, month, day		

**9 Certificate of acceptance**

The SP33 stand serial number \_\_\_\_\_ is made and accepted in accordance with the mandatory requirements of state standards, the existing technical documentation and found fit for service.

Head of Quality Department

LS	----- personal signature	----- full name
	----- year, month, day	