

# Пневмораспределитель В71-23М-01

## Описание

### Description and purpose of the pneumoc distributor В71-23М-01

The **pneumoc distributor В71-23М-01** constitutes a four-line three-position valve with manual lever control, designed for switching the direction of compressed-air flow in pneumoc-type systems. This particular model, known as the **pneumoc distributor В71-23М-01**, serves primarily to manage feed lines to actuators or consumers in automated technological equipment. The device operates with cleaned compressed air (not worse than class 10 per GOST 17433-80) and requires a lubricant additive for smooth touch-less wearing. The УХЛ4 climatic execution (GOST 15150) ensures performance within a broad temperature interval and allows mounting in any spatial orientation, thereby expanding its application field.

Picture of pneumoc distributor В71-23М-01 – general view of the unit with lever and markings.

Figure 1: Pneumoc distributor В71-23М-01 – overall appearance of the device with clear labeling.

### The pneumatic distributor В71-23М-01 uses a three-position scheme for reliable flow redirection

The core functionality of the **pneumoc distributor В71-23М-01** rests on a golden-section internal slider. Moving the control lever shifts the golden inside the housing, thereby redistributing passage paths among feed lines (P), consumers (A, B) and dump ports (R, S). In the middle (neutral) position both consumer lines communicate with atmospheric ports, enabling safe pressure bleed-off and stoppage of executive mechanisms. Such a construction guarantees swift and wear-resistant switching under minimal actuation force (not exceeding 39.2 N). The operational principle of this **pneumoc distributor** ensures minimal internal leakage and long service life under proper operating conditions.

### Technical joke about pneumoc distributor

The engineer-mechanic asks an elderly handyman: «What must one do to abruptly stop a pneumatic actuator?» Handyman, after pondering, replies: «Disconnect the feed air!» Mechanic chuckily says: «Too crude. Simply set our **pneumoc distributor В71-23М-01** to the middle position – it will bleed pressure into atmosphere itself, and everything halts smoothly and safely. Elegant, right?»

### Main technical parameters of the pneumoc distributor В71-23М-01

The technical characteristics that determine the capabilities and fields of application for the **pneumoc distributor В71-23М-01** are enumerated in the table below. All values retain original accuracy while descriptions are reworded for uniqueness.

Parameter designation	Technical value or description
Nominal working pressure	Up to 1.0 MPa (10 bar)
Allowable ambient temperature range	From -40 °C to +50 °C (УХЛ4 execution)

Type of working medium	Compressed air, cleaned not worse than class 10 according to GOST 17433-80
Connection fitting dimensions (thread)	G3/8" (GOST 6111-52), sided attachment
Unit mass, not more than	0.90 kg
Flow capacity (Kv), not less than	1.6 m <sup>3</sup> /h
Nominal passage (Dy)	10 mm
Actuation force when switching, max	39.2 N (4 kgc)
Normal leakage from golden gap, not exceeding	300 cm <sup>3</sup> /min
Normal leakage from internal chamber, not exceeding	50 cm <sup>3</sup> /min

## Advantages and features of operation

The **pneumoc distributor B71-23M-01** offers several practical benefits for production and maintenance staff:

- **Decreased wear-out:** The golden-section design minimizes friction, extending the number of possible switching cycles.
- **Extended service life:** Proper lubrication and clean air feed ensure a resource of several tens of thousands of switchings.
- **Convenient integration:** Compact outer dimensions (approx 120-140 x 80-100 x 70-90 mm) and light weight ( $\leq 0.9$  kg) facilitate mounting into existing systems.
- **Stable pressure handling:** The three-position scheme includes a neutral state for safe system depressurization.
- **Compatibility with a variety of pneumoc systems:** Standard connection thread G3/8" (GOST 6111-52) matches common pneumoc line fittings.

## Operating modes and service life expectancy

The **pneumoc distributor B71-23M-01** in УХЛ4 version is rated for continuous operation in ambient temperatures from  $-40$  °C to  $+50$  °C. Acceptable modes include continuous duty, cyclical loading and start/stop sequences. The actual service term heavily depends on adherence to working conditions: cleanliness of fed air, presence of lubricant additive and absence of excessive mechanical stresses. Under correct maintenance and use of quality spare parts, the device's resource reaches several dozen thousand switching cycles.

## Areas of application and typical equipment usage

This **pneumoc distributor** finds wide employment in various industrial branches owing to its universal nature and wear resistance. It often appears as part of the following equipment types:

- **Upwards- and sideways-acting automata:** for controlling pneumatic actuators, dampers and feed mechanisms.
- **Metal-processing benches and presses:** for governing pneumatic pistons, frictions and mechanical feed lines.

- **Automated conveyor and processing lines:** for positioning and moving items.
- **Robot-technical complexes:** as an element for managing auxiliary pneumatic drivers or manipulators.
- **Industrial ventilation and aspiration systems:** for controlling gates and valves.

## Typical spare parts kit and frequently replaced components

To keep the **pneumoc distributor B71-23M-01** in working order, holding a spare-parts kit is advisable. Repeating components that may wear out include:

Component / spare part name	Purpose and remarks
Resistance rings (circular-section rings)	Primary wear-prone material that ensures hermetic sealing of the golden node.
Golden (slider element)	Central actuating element; wear of its working surface raises leakage.
Return springs	Provide return of lever and golden to neutral position.
Lever control assembly with pivots	May suffer mechanical wear or damage under improper operation.
Housing resistance (prokladges)	Hermetically seal gaps between housing parts.

## Decoding of the model symbol **B71-23M-01**

The marking **B71-23M-01** embeds information about structural specifics:

**B71** – basic type of golden-section flow distributor.

**2** – number of main pneumatic lines (feed-consumer).

**3** – number of switching positions of the golden.

**M** – denotes control type (manual, lever).

**01** – modification or version of design.

**УХЛ4** – climatic execution per GOST 15150 (for normal and cold climate, category 4).

## Overall dimensions, weight and TH ВЭД code

The **pneumoc distributor B71-23M-01** stands out by compact sizes and moderate weight, which eases integration into existing assemblies. For classification on ordering, the TH ВЭД code corresponding to pneumatic units for flow distribution is given in the following table.