Ball valves are used as shut-off valves in pipelines for transmission of non-aggressive natural gas at temperature minus 60°C up to plus 80°C. These valves are intended for installation on gas-main pipelines, collection and gas treatment facilities in compressor gas-distribution stations.

Air-tightness of ball valves corresponds to class “A” (ГОСТ 9544-93)
Climatic version is according to ГОСТ 15150-69:
- У1 – temperate (-45°C up to +50°C)
- ХЛ1 – cold (-60°C up to +45°C)
- УХЛ1 – temperate and cold (-60°C up to +50°C)
Connection to the pipeline is carried out by welding
Manufacture and delivery are fulfilled as per ТУ26-07-1466-92, ТУ51-0303-22-2000 (DN 200mm)
Average service life of the ball valves is 30 years

Materials used for fabrication:
- Valve body – steel 09Г2С
- Ball – steels 09Г2С, 20ГМЛ with Cr coating 30μm
- Spindle – steel 20Х3А with Cr coating 30μm
- Sealing – rubber and polyurethane

Design characteristics:
- all-welded body of the valve eliminates gas leakage to the environment
- gate seal is fabricated from high wear- and erosion -proof polyurethane
- “ball in supports” design of the gate with bearings made from metalfluoraplastic material not requiring any greasing during operational process
- high tightness of the gate is assured by permanent pressing of both seats of double action to the ball by means of springs and operating pressure of gas
### Basic performance data for ball valves DN 200 - 1400 mm

| Article reference designation | Design document designation | DN, mm | PN, MPa | Climatic version to GOST 15150-69 | Type of installation | Drive type | Overall dimensions and dimensions of connecting ends for welding, mm | Weight, kg, not more
|-----------------------------|----------------------------|--------|---------|-----------------------------------|----------------------|-------------|---------------------------------------------------------------|-------------------|
| 11nc(6)761n MB39183-200    | 10                         | underground | ПГП | 830 | 2105 | 225 | 520 | Working fluid temperature up to +80°

ПГП—pneumohydrodrive, ПСД—air actuator, РП—hand drive.

*valve with rubber sealing made from fluorine rubber resin with working fluid temperature -60° up to +100°

Reference:

- Article –pneumohydrodrive, (6)765n3
Ball valves of underground version are protected from external action by coating consisting of elastic anticorrosive mastic Fruks-1000A or carboflex material which provide reliable anodic shield.

Solid chromium is applied to the functional surfaces of the balls to protect from corrosive and erosive wear and to increase service life of the ball valves.

**Pneumohydrodrives for ball valves DN200 – 1400 mm**

Pneumohydrodrives for handling of ball valves DN 200 - 1400 mm manufactured at Volgogradneftemash JSC can be operated at ambient temperature -60°C up to +50°C. Flange connection is used for attachment of the drive to the valve. Pneumohydrodrives are supplied with different control units in compliance with the requirements of customers:

- ЭПУУ (electropneumatic control assembly) – voltage of the actuating signal is 110V or 24VDC;
- БУК (valve control unit) – voltage of the actuating signal is 110V or 24V DC;
- АА3К (robot for emergency shutdown of the valve with a built-in control unit) – voltage of the actuating signal is 110V or 24V DC or 220V AC.

<table>
<thead>
<tr>
<th>Valve DN, mm</th>
<th>Maximum pressure, MPa</th>
<th>Torque, KN·m</th>
<th>Overall dimensions, mm</th>
<th>Weight, kg</th>
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