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# 1 Purpose

1.1 The manifold is designed to obtain additional connections for instruments under test.

1.2 The manifold is designed to work together with GUSK hydraulic comparison calibration devices, MP deadweight testers, MGP deadweight testers, and GSKA automated hydraulic calibrating systems produced by “Alfapascal” Limited Liability Company.

1.3 Depending on the manifold’s technical capabilities, it can be used with other laboratory equipment.

# 2 Technical Characteristics

Operating pressure

Maximum..... 100 (1000) MPa (kgf/cm<sup>2</sup>)

Minimum ..... -0,1 (-1) MPa (kgf/cm<sup>2</sup>)

Working fluid ..... air, oil, water, alcohol

Overall dimensions (LxWxH), no more than

2 stands ..... 335×130×210 mm

3 stands ..... 570×130×210 mm

4 stands ..... 760×130×210 mm

Filter weight, no more than

2 stands ..... 3,6 кг

3 stands ..... 5,7 кг

4 stands ..... 7,5 кг

# 3 Scope of Supply, pcs

Stands, pcs

2 3 4

Manifold..... 1 1 1

Connecting nut M20x1.5..... 2 3 4

Connecting nut M12x1.5..... 1 2 3

Connecting nut G½..... 1 2 3

Connecting nut G¼..... 1 2 3

Handwheel of the connecting nut..... 2 3 4

Plug..... 2 3 4

Connecting tube (optional)..... 1 1 1

Operation Manual ..... 1 1 1

Manometer’s metal-rubber seal ..... 6 9 12

## 4 Instrument Design and Principle of Operation

4.1 The manifold's appearance and general design are shown in Fig. 1.

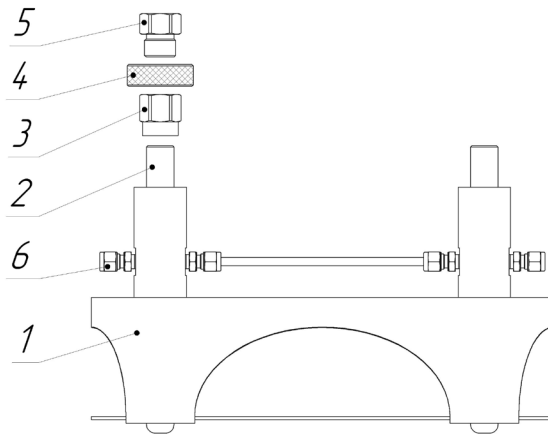


Fig. 1. Manifold

1 – base; 2 – stand; 3 – connecting nut; 4 – connecting nut's handwheel;  
5 – plug; 6 – fitting

4.2 The manifold consists of base 1 (Fig. 1) made of fashioned steel plate, on which stands 2 are installed. Connecting nut 3 shall be installed on the stand to connect the manometer to it. To facilitate connection, connecting nut's handwheel 4 is used. Connection between the manifold and the instrument shall be made with a tube (steel or plastic—depending on the purpose) and fittings 6. There are two fittings 6—the one is used for connection between the manifold and the instrument, and the second is used for prospective connection with another manifold (the second fitting is plugged).

To connect the manifold to the instrument, the tube shall be first connected to the manifold and then to the instrument. If required, the tube may be bent a little, considering that the steel tube's bending radius shall be at least 12.5 mm.

### Attention

Multiple bending/unbending of the steel tube is prohibited!

## 5 Safety Precautions

### Attention

This Section aims to ensure personnel safety during operation as well as integrity of the manifold and equipment running together with it.

5.1 Prior to installation of measuring instruments under test, make sure that they are clean and that connecting fittings are serviceable.

5.2 Use only standard sealing rings.

### Attention

Manually tighten the connecting nuts until noticeable stop.

5.3 The pressure specified in the user's manual must not be exceeded.

5.4 Instruments may be removed from the unit only after complete pressure release.

## 6 Preparation for Operation

6.1 Unpack the manifold and wipe it with clean cloth.

6.2 Put the manifold on the table and adjust the supports.

6.3 Connect the connecting tube to the manifold.

6.4 Connect the required instrument—GUSK hydraulic comparison calibration device, MP deadweight tester, MGP deadweight tester, or GSKA automated hydraulic calibrating system.

6.5 Bleed the entire system (in case if a GUSK hydraulic comparison calibration device or MP deadweight tester is used) according to operation manuals for those instruments.

## 7 Operation Procedure

7.1 The operation procedure is described in the Operation Manual for the instrument connected.

## 8 Maintenance

8.1 In order to keep the manifold in the fault-free condition, before operation, it shall be inspected, and dust and contaminations shall be removed from it with dry cloth.

8.2 Check the integrity of seals and replace them, if necessary.

## 9 Warranty Obligations

9.1 The Manufacturer guarantees manifold operation, provided that the operating, storage, and transportation conditions are met.

9.2 The warranty service life is 18 months.

9.3 The warranty storage life is 6 months.

9.4 The average service life is at least 8 years.

## 10 Claim Details

In case of a failure, prepare a certificate of required repair and submit it to the following address: “Alfapascal” LLC, 36, 2<sup>nd</sup> Paveletskaya, Chelyabinsk, 454047, Russia, phone: +7 (351) 725-74-50, e-mail: q@alfapascal.ru

## 11 Acceptance Certificate

The KL\_\_\_\_\_ manifold Serial Number \_\_\_\_\_ complies with engineering documentation KD AP.048.04.000 and is deemed to be suitable for operation.

Date of issue

Responsible person \_\_\_\_\_  
Signature Surname

LS

## 12 Packing Certificate

The KL\_\_\_\_\_ manifold Serial Number \_\_\_\_\_ was packed by “Alfapascal” LLC in compliance with engineering documentation KD AP.048.04.000.

Date of packing

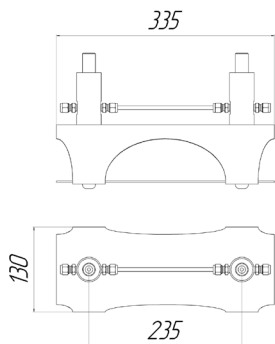
Responsible person \_\_\_\_\_  
Signature Surname

LS

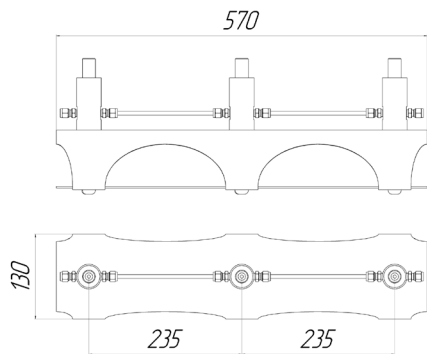
### Note

The Manufacturer reserves the right to make changes to the equipment design that do not affect basic characteristics, without prior notice.

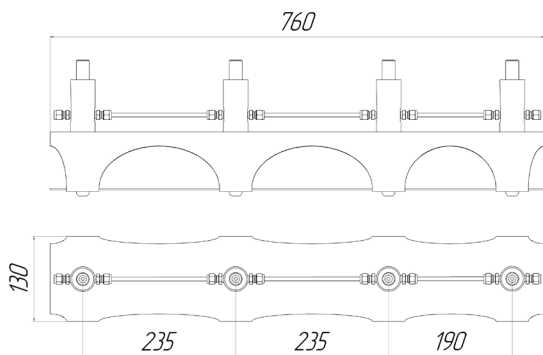
## Manifold design versions



*Two stands KL-2*



*Three stands KL-3*



*Four stands KL-4*