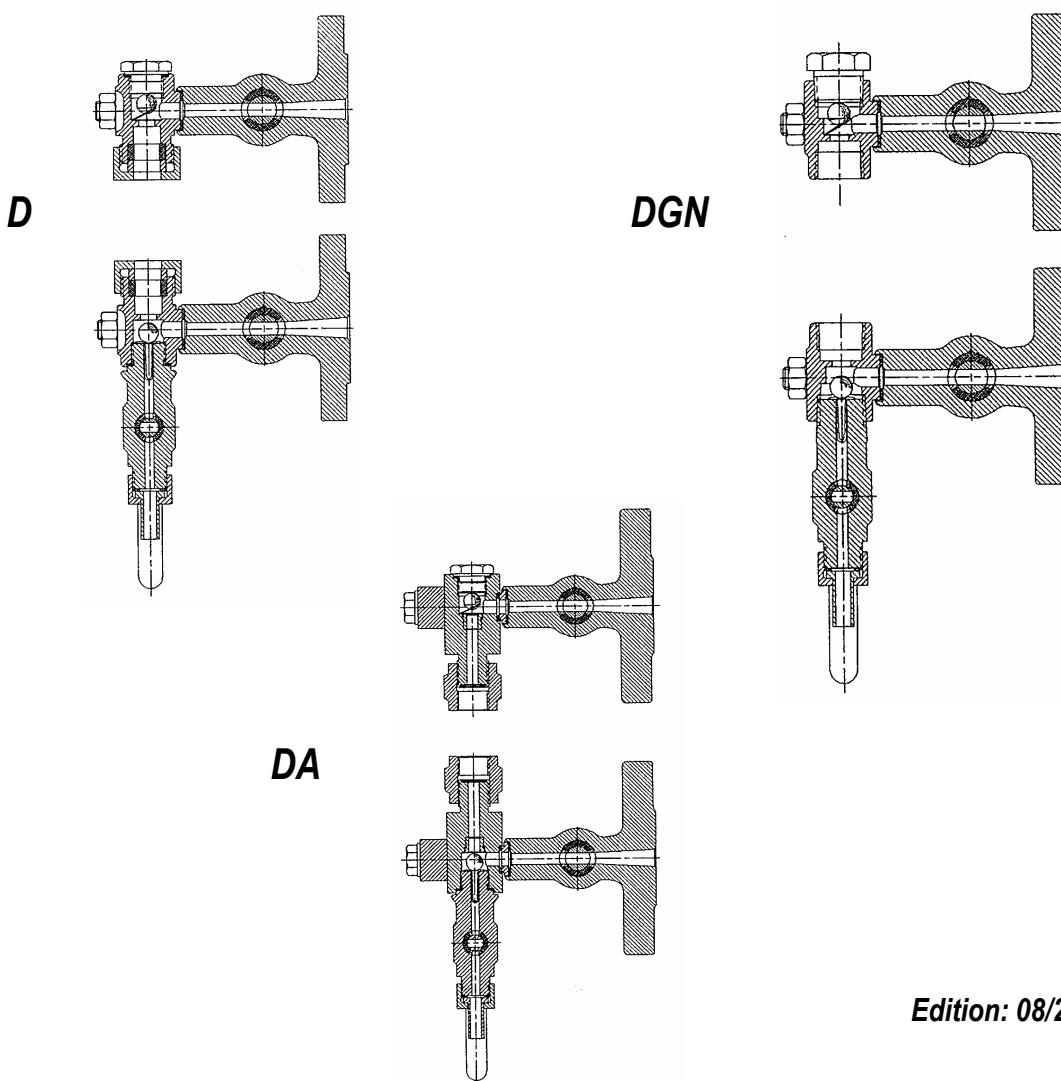

Fitting and Handling Instructions for

KLINGER

**Gauge Cock Units
with safety balls,
asbestos free design**



Edition: 08/2001



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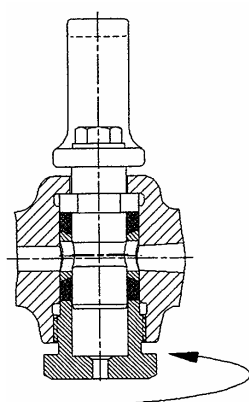
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Operating principle

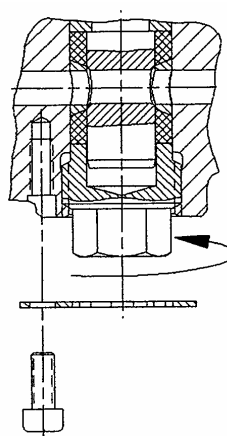
The design of Klinger gauge cocks is based on the same principle as that of the Klinger straightway cocks of the AB series. The gauge cocks are equipped with a cylindrical cock plug sealed by means of an elastic and replaceable packing sleeve. The top and the bottom stuffing-box heads are equipped with a safety ball.

Retightening: If a leak occurs during operation the pressure on the packing sleeve can be increased by using the tightening nut. The elastic packing sleeve is thus pressed firmly against the cock plug and the cock is sealed again. However, the cock should only be retightened in the OPEN-position.

Gauge cocks D, DGN, DA



Drain cock ABL-12



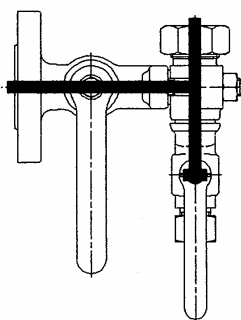
A groove and torque joint secures the packing sleeve against twisting in the body. In the areas of passage, the sleeve is reinforced with eyelets made of acid-resistant steel which guarantee full passage and protect the sleeve against erosion.

Indication of position

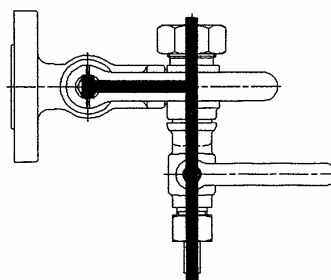
The position of the bore is indicated by the position of the flat of the plug. In addition, there are corresponding notches both in the cock plug and the handle of the cock.

When open, the handles of the gauge cocks always point downward, i.e. they are positioned at right angles to the direction of flow. When close, the handle of the ABL points downwards, i.e. its position corresponds to the direction of flow. In this position the weight of the handle prevents any accidental change of the handle's position

Operating position



Drain position



Storage instructions for Klinger gauge cock units and the respective spare parts

Gauge cock units and the respective spare parts should only be stored in dry store rooms. Fully assembled gauge cock units have to be stored as supplied. Spare parts of gauge cock units should be handled with care and should be stored in their original packing.

It is recommended to take protective measures if the parts are stored under dusty conditions. To avoid mistakes, all parts should be marked according to the delivery documents and stored in the appropriate place.

The ambient temperature in the store room must be between -20°C and $+50^{\circ}\text{C}$. Sudden changes in temperature should be avoided (danger of condensation or perspiration water).

Instructions for handling and use are enclosed with each shipment and should be stored along with the parts to ensure that important information and documents are handed on with each component. Special documentations (spare parts lists) help to identify Klinger spare parts.

Any changes made by Klinger which may affect inventories will be published in circular letters well in advance.

Any damage due to inappropriate storage will release Klinger of any obligation delivered from warranty, guarantee and product liability.

Fitting of the gauge cock unit D to the boiler (for item number see page 10)

- Any shut-off valves between connection flanges and boiler must be closed. If there are no shut-off valves, the boiler has to be relieved of pressure
- Install complete gauge cock unit on K-tube of gauge body
- Tighten union nut (18) lightly
- Insert gaskets and screw gauge body complete with gauge cock unit to the boiler's flanges so that it is pressure-tight
- Turn gauge body to desired position and tighten union nut (18)

Fitting of the gauge cock unit DGN to the boiler

- Any shut-off valves between connection flanges and boiler must be closed. If there are no shut-off valves, the boiler has to be relieved of pressure
- Insert gaskets and screw gauge body complete with gauge cock unit to the boiler's flanges so that it is pressure-tight

Fitting of the gauge cock unit DA to the boiler (for item number see page 14)

- Any shut-off valves between connection flanges and boiler must be closed. If there are no shut-off valves, the boiler has to be relieved of pressure
- Insert gaskets and screw gauge cocks DA to the boiler's flanges so that it is pressure-tight
- Loosen hexagon head cap screw (26) until there is sufficient space between pressure plate (27) and gasket (14) to install connecting pieces (15)
- Install gauge body with connecting pieces on gauge cocks

CAUTION: Be careful when fitting the connecting pieces onto sealing set DA (8, 13 and 14). The items are cemented into the gauge cocks and must fit exactly into the recesses of the connecting pieces.

- Tighten pressure plate (27) with hexagon head cap screws (26)
 - Loosen connecting nut (18), turn gauge body to the desired position, and retighten connecting nut (18)
-

Replacement of the gland ring for gauge cock unit D **(for item number see page 10)**

DISSASSEMBLY:

- *Any shut-off valves between connection flanges and boiler must be closed, if there are no shut-off valves, the boiler has to be relieved of pressure*
- *Open drain cock and drain level gauge completely*
- *Loosen union nut (18)*
- *Screw off hexagon head cap screws (9)*
- *Pull gauge body with stuffing-box heads off stud bolts (10)*
- *Remove gaskets (8)*
- *Place level gauge on e-level surface*
- *Pull stuffing-box head off K-tube*
- *Screw off union nut (18)*
- *Remove thrust ring (14) and gland ring (15)*
- *Clean and check all sealing surfaces*

ASSEMBLY:

- *Install new thrust ring (14) and gland ring (15)*
 - *Screw on (but do not tighten) union nut (18)*
 - *Slide stuffing-box head onto stud bolts (10)*
 - *Screw on and tighten hexagon head cap screw (9)*
-

**Replacement of the gasket between stuffing-box
heads D, DGN and gauge cock D
(for item number see page 10 for D, page 12 for DGN)**

DISSASSEMBLY:

- Any shut-off valves between connection flanges and boiler must be closed, if there are no shut-off valves, the boiler has to be relieved of pressure
- Open drain cock and drain level gauge completely
- Screw off hexagon head cap screws (9)
- Pull gauge body with stuffing-box heads off stud bolts (10)
- Remove gaskets (8)
- Clean and check all sealing surfaces

ASSEMBLY:

- Insert new gasket (8) onto gauge cock
- Slide gauge body with stuffing-box heads onto stud bolts (10)
- Screw on and tighten hexagon head cap screw (9)

**Replacement of the sealing set between connecting unit
DA and gauge cock DA
(for item number see page 14)**

DISSASSEMBLY:

- Any shut-off valves between connection flanges and boiler must be closed, if there are no shut-off valves, the boiler has to be relieved of pressure
 - Open drain cock and drain level gauge completely
 - Loosen hexagon head cap screws (9) until there is sufficient space between pressure plate (27) and gasket (14) to remove connecting pieces (15)
 - Remove gauge body with connecting pieces from the gauge cocks
 - Remove sealing set DA (consisting of 8, 13 and 14)
 - Clean and check all sealing surfaces
-

ASSEMBLY:

- Cement new sealing set DA into gauge cock
- Install gauge body with connecting pieces on gauge cocks

CAUTION: Be carefully when fitting the connecting pieces onto sealing set DA (8, 13 and 14).
These items are cemented into the gauge cocks and must fit exactly into recesses of the connecting pieces.

- Tighten pressure plate (27) with the hexagon head cap screws (26)

**Replacement of the packing sleeve for gauge cock units D, DGN and DA
(for item number see page 10 for D, page 12 for DGN and page 14 for DA)**

DISSASSEMBLY:

- Any shut-off valves between connection flanges and boiler must be closed, if there are no shut-off valves, the boiler has to relieved of pressure
 - Open drain cock and drain level gauge completely
 - Remove level gauge completely with the gauge cock units from the boiler flanges
 - Remove gaskets
 - Place level gauge on a level surface
 - Remove threaded plug (5)
 - Remove hexagon head cap screw (11), washer (12) and handle (7)
 - Tap cock plug (3) with split ring (4) and packing sleeve (2) out of the body (1)
 - Remove split ring (4)
 - Press cock plug (3) out of packing sleeve (2)
 - Clean and check all sealing surfaces and parts
If the sealing surface of the cock plug (3) is damaged or shows signs of corrosion the cock plug must be replaced as well.
-

ASSEMBLY:

- *Insert split ring (4) into the groove of the cock plug (3)*
- *Slide new packing sleeve (2) onto cock plug (3)*
- *Install entire unit into the body hole*

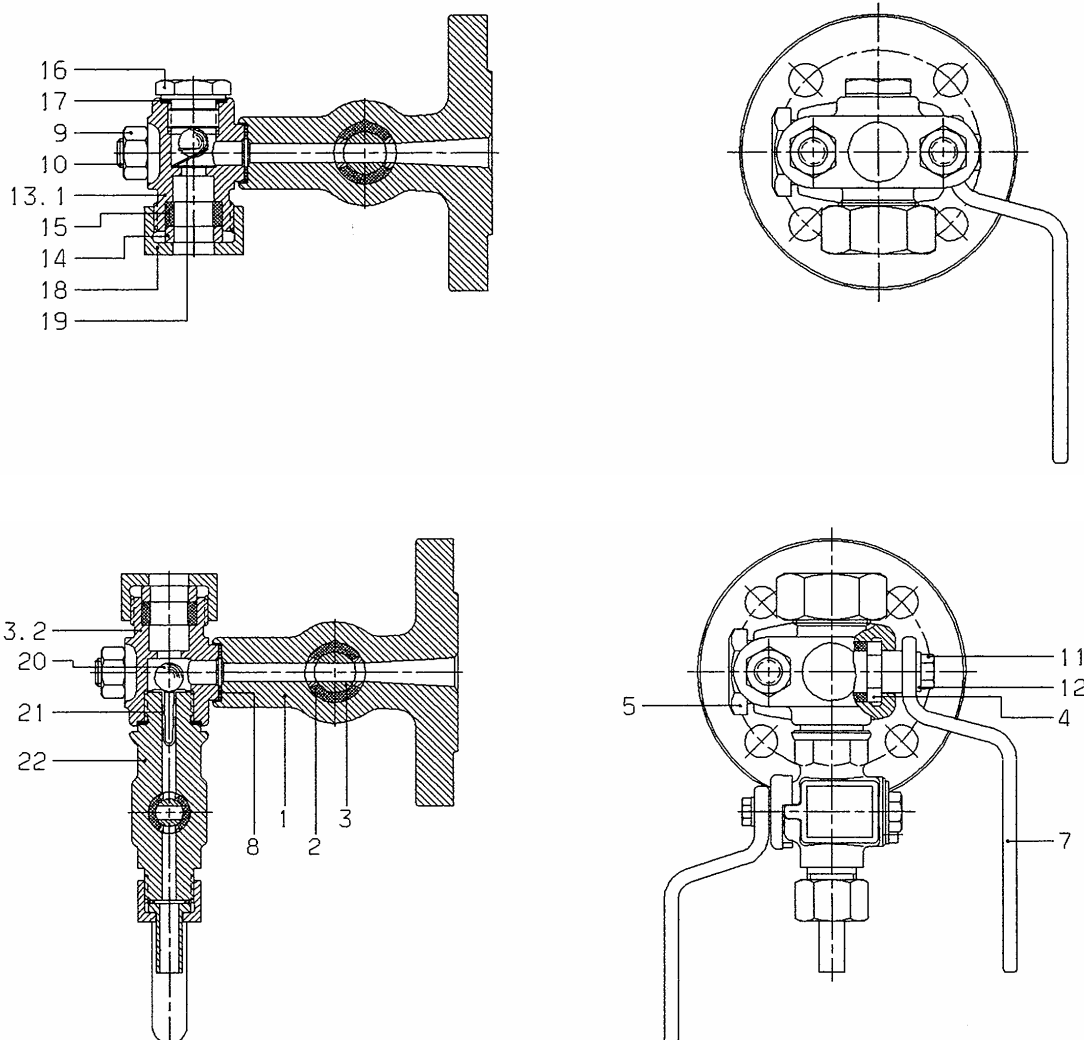
CAUTION: *The spring of the packing sleeve (2) must be located in the groove of the body bore.
The eyelets of the packing sleeve (must neither jut out nor be skewed.*

- *Apply Molykote grease on the threaded plug (5) and tighten plug*
- *Put handle (7) onto cock plug (3) (check for the correct position) place washer (12) onto handle and tighten with hexagon head cap screw (11).*

Replacement of the packing sleeves for drain cock ABL-12:

Follow instructions for replacement of packing sleeves for gauge cock units (see page 7)

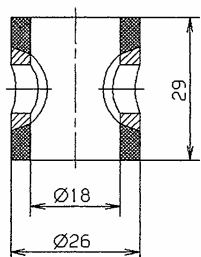
Component sheet for gauge cock unit D



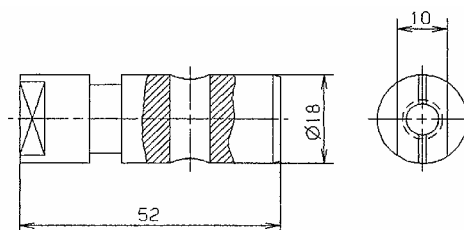
Item No.	Description	Spare Parts	Item No.	Description	Spare parts
1	Gauge cock body D8		13.1	Stuffing-box D8, top	
2	Packing sleeve AB 18	*	13.2	Stuffing-box D8, bottom	
3	Cock plug AB 18	*	14	Thrust ring	
4	Split ring AB 18		15	Gland ring	*
5	Threaded plug		16	Plug B3 (R1/2")	
7	Handle of cock		17	Gasket	*
8	Gasket	*	18	Union nut A11 (R1")	
9	Hexagon nut		19	Compression spring ABR 22	
10	Stud bolt		20	Ball 1/2"	
11	Hexagon head cap screw		21	Anti-block spring	
12	Washer		22	Drain cock ABL-12R 1/2"	

Spare parts sheet for gauge cock unit D

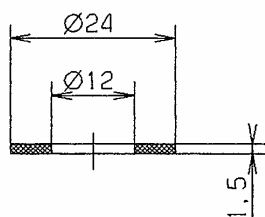
Item 2 Packing sleeve
Material: KAF



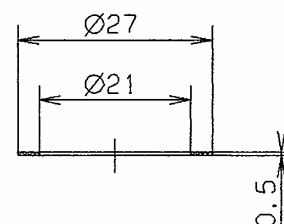
Item 3 Cock plug
Material: 1.4401



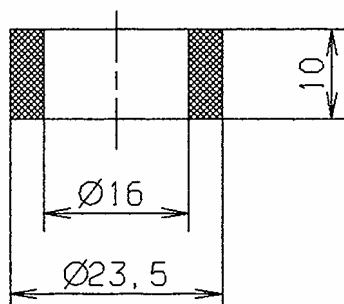
Item 8 Gasket
Material: K-SIL C4450



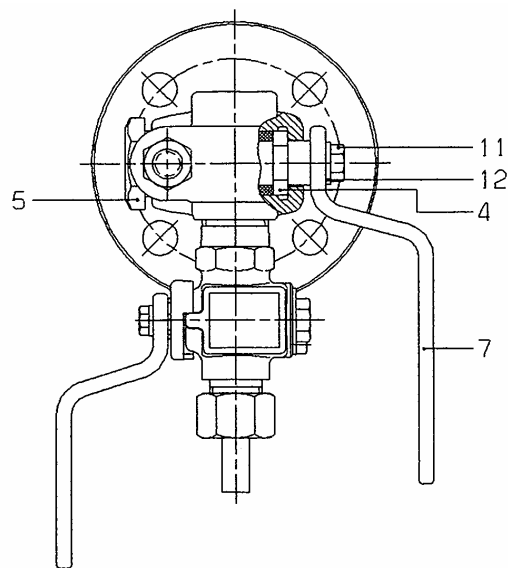
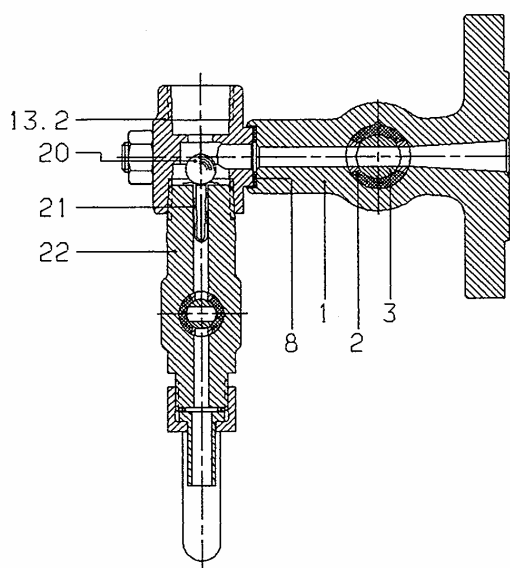
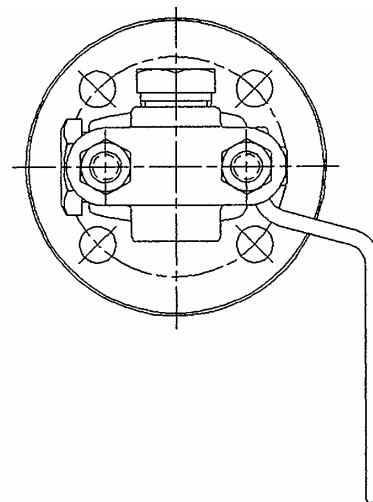
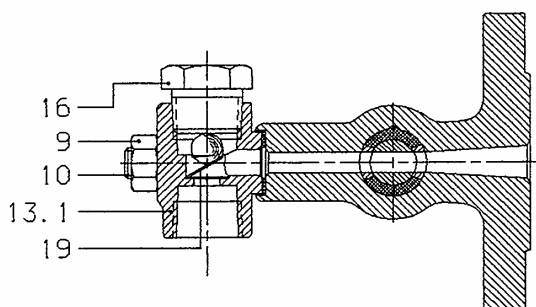
Item 17 Gasket (3x)
Material: soft nickel



Item 15 Gland ring
Material: Graphite



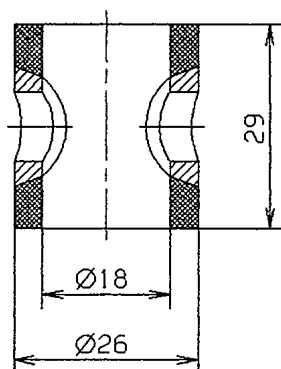
Component sheet for gauge cock unit DGN



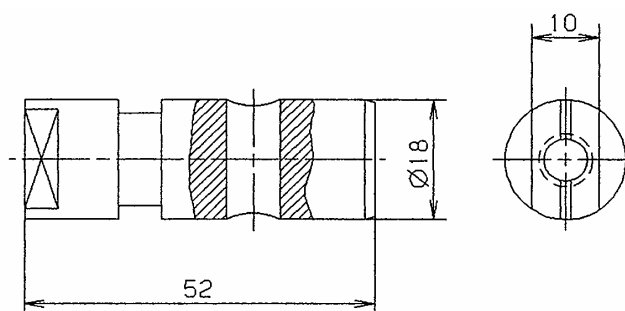
Item No.	Description	Spare Parts	Item No.	Description	Spare parts
1	Gauge cock body D8		11	Hexagon head cap screw	
2	Packing sleeve AB 18	*	12	Washer	
3	Cock plug AB 18	*	13.1	Stuffing-box D8, top	
4	Split ring AB 18		13.2	Stuffing-box D8, bottom	
5	Threaded plug		16	Plug B3 (R1/2")	
7	Handle of cock		19	Compression spring ABR 22	
8	Gasket	*	20	Ball 1/2"	
9	Hexagon nut		21	Anti-block spring	
10	Stud bolt		22	Drain cock ABL-12R 1/2"	

Spare parts sheet for gauge cock unit DGN

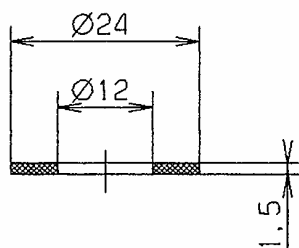
Item 2 Packing sleeve
Material: KAF



Item 3 Cock plug
Material: 1.4401

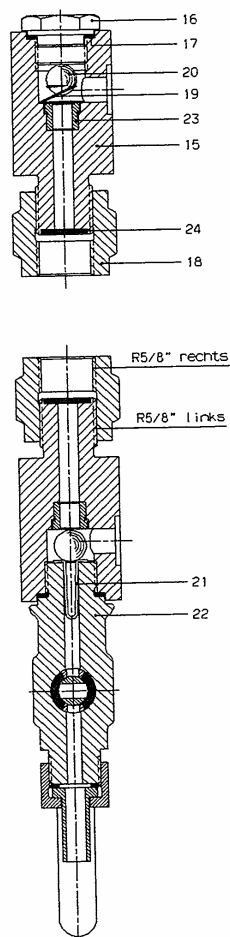


Item 8 Gasket
Material: K-SIL C4450

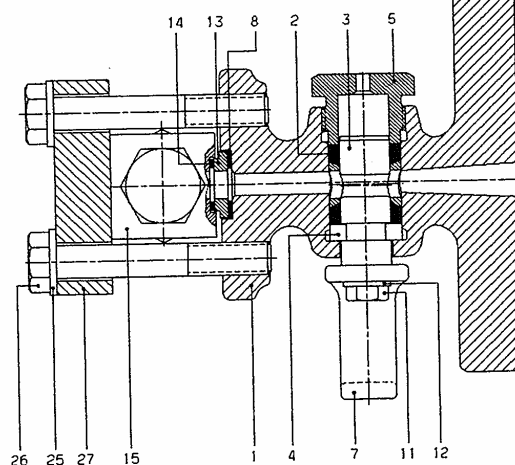


Component sheet for gauge cock and connecting unit DA

Connecting unit DA



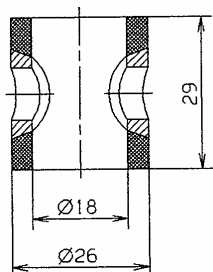
Gauge cock unit DA



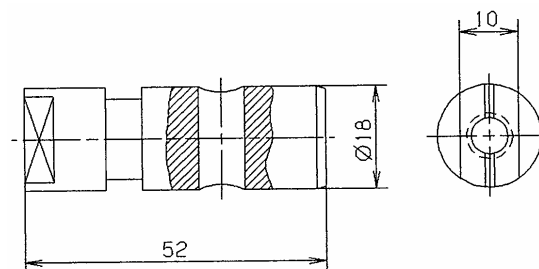
Item No.	Description	Spare Parts	Item No.	Description	Spare parts
1	Gauge cock body D8		16	Plug B 3 (R1/2")	
2	Packing sleeve AB 18	*	17	Gasket	*
3	Cock plug AB 18	*	18	Union nut ABR 22	*
4	Split ring AB 18		19	Compression spring DA	
5	Threaded plug		20	Ball 1/2"	
7	Handle of cock		21	Anti-block spring	
8	Gasket	*	22	Drain cock ABL-12 R 1/2"	
11	Hexagon head cap screw		23	Seating bush	
12	Washer		24	Gasket	*
13	Spacer ring	*	25	Washer	
14	Gasket	*	26	Hexagon head cap screw	
15	Connecting piece DA		27	Pressure plate	

Spare parts sheet for gauge cock unit DA

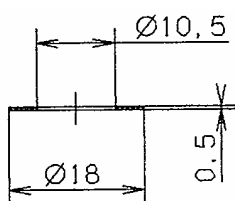
Item 2 Packing sleeve
Material: KAF



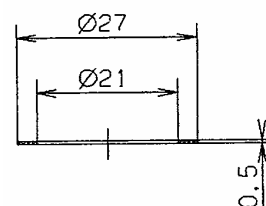
Item 3 Cock plug
Material: 1.4401



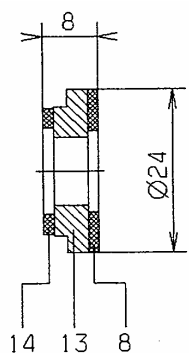
Item 24 Gasket (3x)
Material: soft nickel



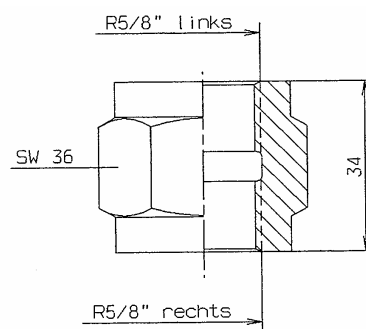
Item 17 Gasket (3x)
Material: soft nickel



Sealing set DA
consisting of items 8, 13 and 14; cemented
Material: K-SIL

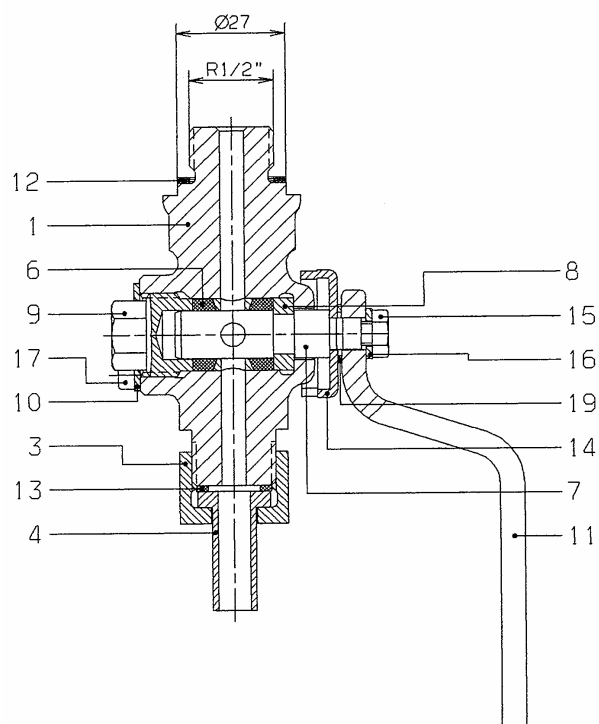


Item 18 Union nut
Material: 1.0715.07

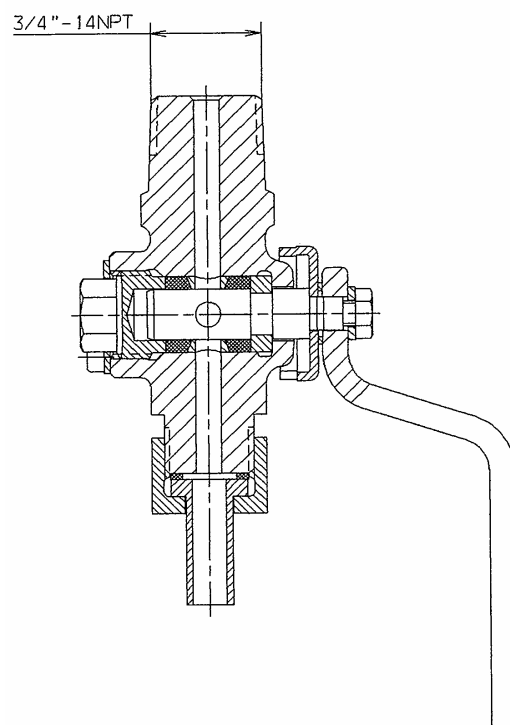


Component sheet for drain cock ABL 12

ABL-12 R1/2"



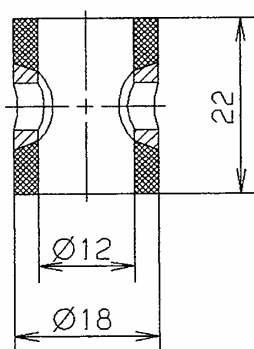
ABL-12 3/4"-14NPT



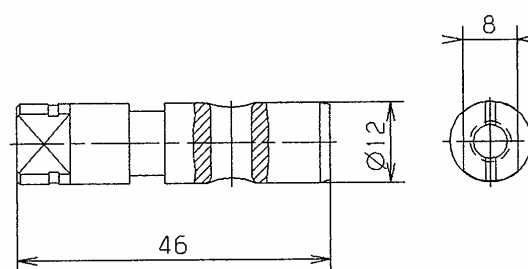
Item No.	Description	Spare Parts	Item No.	Description	Spare parts
1	Body		11	Handle of cock	
3	Union nut A2 (R1/2")		12	Gasket	*
4	Tube		13	Gasket	*
6	Packing sleeve AB 12	*	14	Stop	
7	Cock plug AB 12	*	15	Hexagon head cap screw	
8	Split ring AB 12		16	Washer	
9	Threaded plug		17	Fillister head screw	
10	Locking disk		19	Circlip	

Spare parts sheet for drain cock ABL-12

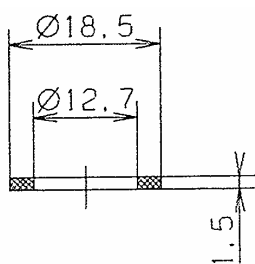
Item 6 Packing sleeve
Material: KAF



Item 7 Cock plug
Material: 1.4401



Item 13 Gasket
Material: K-SIL C 4430



Item 12 Gasket (3x)
Material: soft nickel

