



### Liquid carbon dioxide overflow station SPU 10/50.

Overflow station SPU10/50 is designed for liquid carbon dioxide overflow from one tank into another.

Gear-type pump is used as a pumping unit of station (**designation for order – gear-type pump KD 07.02.00.00**). Two gears made of textolite or caprolon – driving gear and ring gear provides feeding of liquid carbon dioxide.

Sealing of pump inner cavities consists of rubber O-ring and end seal located on drive shaft. Sealing is performed along the



contact surface (steel and fluorine-plastic).

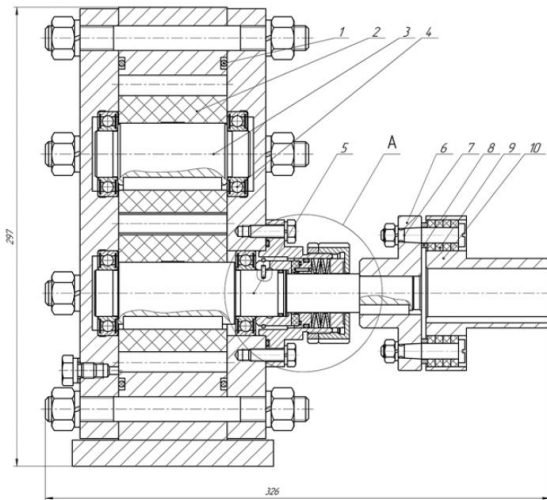


### SPTA\* set.

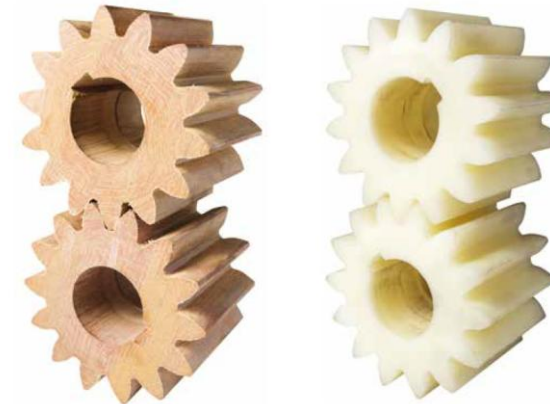
(is included into the supply scope of station SZU10/50)

Pos.	Identification	Designation	Quantity
1.	039-042-19	Ring GOST 9833-73	1
2.	026-030-25	Ring GOST 9833-73	1
3.	040-045-30	Ring GOST 9833-73	2
4.	065-070-30	Ring GOST 9833-73	2
5.	170-180-58	Ring GOST 9833-73	2
6.	80106 (or analogue)	Bearing GOST 7242-81	2
7.	65-70	Special-type wrench for slotted nuts	1
8.	Assembly: cage KD07.02.00.23, ring 039-042-19, pin 2n6x10, seal KD 07.02.00.09.	Cage with end seal	1

\* While ordering SPTA set, it is necessary to specify its scope because it can be changed at the Manufacturer's discretion.

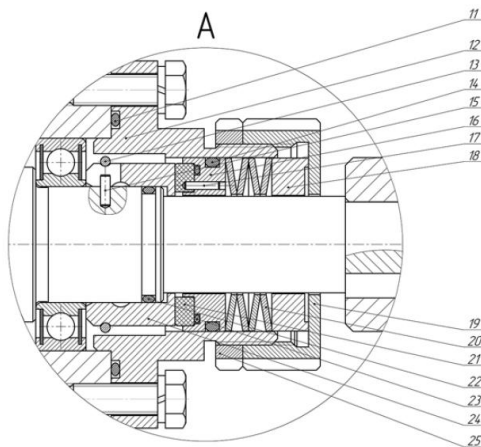


**Gear-type pump KD 07.02.00.00. General view.**

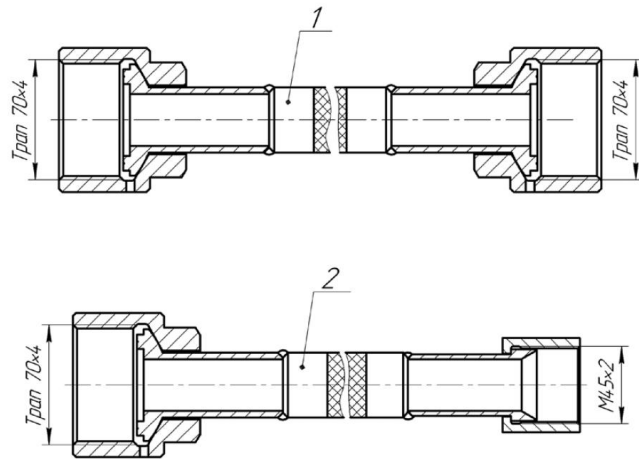


**List of spare parts for gear-type pump KD 07.02.00.00.**

Pos.	Identification	Designation	Material
1.	170-180-58	Ring GOST 9833-73	Rubber
2.	KD 07.02.00.07	Gear ring	Textolite / caprolon
3.	KD 07.02.00.06	Axis	Steel
4.	80106	Bearing GOST 7242-81	-
5.	KD 07.05.00.05	Shift	Steel
6.	KD 07.02.00.14	Half-coupling	Steel
7.	KD 07.02.00.13	Pin	Steel
8.	KD 07.02.00.15	Washer	Steel
9.	MUVP K1 19x10x2.5x5	Ring	Rubber
10.	KD 07.02.00.24	Half-coupling	Steel
11.	065-070-30	Ring GOST 9833-73	Rubber
12.	KD 07.02.00.19	Barrel	Steel
13.	KD 07.02.00.20	Lock ring	Steel
14.	040-045-30	Ring GOST 9833-73	Rubber
15.	2.5N9x8	Pin GOST 3128-81	Steel
16.	KD 07.02.00.23	Cage	Steel
17.	2n6x10	Pin GOST 3128-81	Steel
18.	KD 07.02.00.12	Pressure sleeve	Steel
19.	KD 07.02.00.11	Pressure nut	Steel
20.	KD 07.02.00.10	Disk spring	Steel
21.	KD 07.02.00.09	Seal	Fluorine plastic F4K20
	KD 07.02.00.09-lzn	Seal	Antifriction carbon material
22.	026-030-25	Ring GOST 9833-73	Rubber
23.	039-042-19	Ring GOST 9833-73	Rubber
24.	KD 07.02.00.21	Sleeve	Steel
25.	KD 07.02.00.22	Locknut	Steel



**Gear-type pump KD 07.02.00.00. Unit of end seal.**



**Metal hose. General view.**  
1. Gas hose, 2. Liquid hose.



#### Additional equipment

**Metal hoses.** The station is additionally equipped with bellows stainless metal hoses for connection with stationary reservoirs and transport tanks. Standard set of hoses include: two hoses DN32, P40, L2000 with nuts on heads M4.5x2 and Tr70x4 and one hose DN20, PN64, L3000 with nuts on heads Tr70x4. **Designation for order of non-standard hoses: diameter DN, pressure PN, length L and type of heads.**

**End seal made of antifriction carbon material with increased wear resistance with addition of babbits.** For repair of



pump with installation of such type of seal, it is recommended to perform combined replacement of moving and fixed parts of end seal and mating general rubber goods (parts of pos. 13, 14, 16, 21, 22, 23, 24). **Designation for order: Seal KD 07.02.00.09-lzn.**

**Filter** is used for liquid carbon dioxide cleaning from solid-state mechanical impurities, aerosol and condensed moisture, oil, and other impurities by mechanical method. Main technical characteristics of filter for liquid carbon dioxide cleaning are as follows:

- Operating pressure: PN = 2.5 MPa;
- Type of medium – liquid carbon dioxide;
- Recommended operating environment temperature: -40°...-20° C;
- Medium (gas) flow rate – not more than 3...5 m/s.

- Cutoff filtration rating - 100 micron.
- Rated filtering efficiency as per mechanical impurities – at least 99.0%;
- Maximum operating pressure drop on filter – not above 0.2 MPa.

**Designation for order – Filter FS10/50**

#### Additional services.

##### Installation of reversing-type starter.

Under order, it is possible to manufacture station of reversing type, when pump is able to pump liquid carbon dioxide in both directions (back and forth).

**Designation for order: SPU10/50R.**



##### Installation of TsZhU-type transport tank into tambour.

Mounting of station purchased from our company on the Customer's tank is to be performed in the territory of our enterprise. **Designation for order: SPU10/50T.**

**Overhaul of gear-type pump KD 07.02.00.00.** or analogous gear-type pumps of other manufacturers. Repair includes all necessary process operations, and the Customer will receive pump with operating technical characteristics and appearance of new pump. Repair possibilities and costs are determined after preparation of damage assessment acts on exchanger by our specialists.