

Kondić

Belgrade, Blagoja Marjanovića 8

Tel: +381 11 2270 995

e-mail: kondics@eunet.rs

e-mail: kondicdoo@gmail.com

www.kondicdoo.com

TRANSFORMER OIL REGENERATION UNIT - technical documentation -



TRANSFORMER OIL REGENERATION UNIT

SPECIFICATION

Type of fluid	transformer oil
Oil capacity	1000 l/h
Vessel dimensions	2 x Ø400 x 1200 mm
Maximal pressure	5 bar
Unit, dimensions	1650x1220x1500 mm
Prihvatna tankvana, dimenzije	1470x1000x1000 mm
Unit, weight	cca. 200 kg

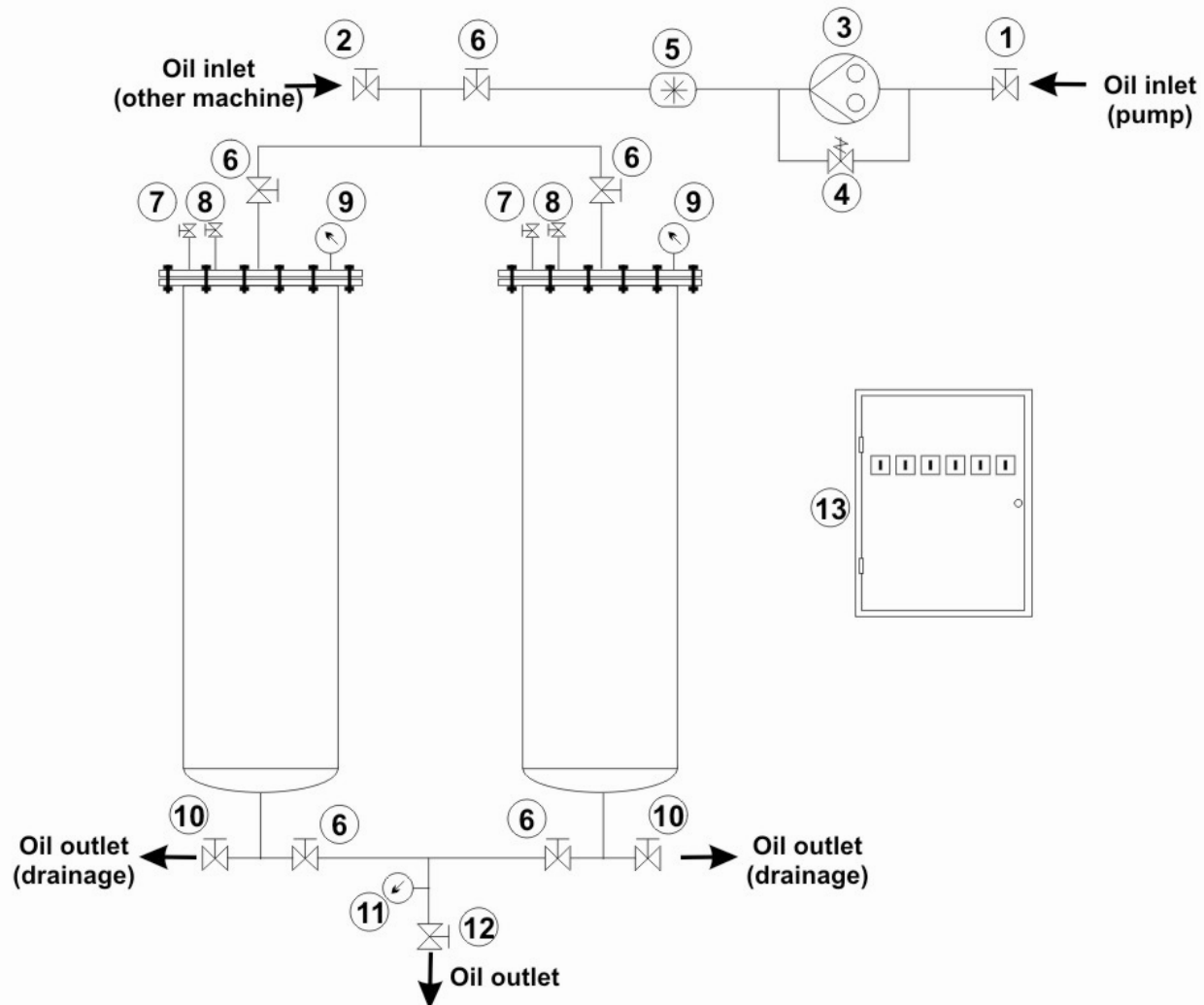
Unit consist of two regeneration columns, which can be used in separate or parallel mode of transformer oil regeneration.

Oil is driven through the regeneration columns by means of gear pump with the capacity of 1000 lit/h.

Unit is delivered with separate tub for collection of earth used for oil regeneration.

The Unit is delivered ready for operation, together with control panel, wiring, and safety devices which provides maximum operating security.

Schematic drawing of the transformer oil regeneration Unit is presented in the following drawing:



The details on the particular stages of operation are given with each part of the Unit in the following text..

THE UNIT CONSISTS OF:

- 1. Inlet valve No 1.** Spherical valve 1" with special teflon gaskets. It represents inlet at the Unit by means of gear pump.
- 2. Inlet valve No. 2** Spherical valve 1" with special teflon gaskets. It represents inlet at the Unit by alternative pump / machine.
- 3. Gear pump** Special gear pump for transformer oil. Pump capacity is 1000 lit/h.
- 4. Overflow valve** is installed on the gear pump and it protects the Unit from an excessive rise of pressure in case outlet valve is negligently closed or because of some other reason.
- 5. Flow meter** Digital flow meter (with its own power supply), is positioned at the outlet of the Unit and serves for control of the processed oil quantity.
- 6. Regulation valves** Spherical valves 1" which serves for flow regulation in different processing modes.
- 7. Air valve** a spherical valve 1/2" for elimination of trapped air from the columns.
- 8. Vacuum valve** a spherical valve 1/2" which serves to connect the vacuum pump (optionally) to extract the air from columns before process starts.
- 9. Mano-vacuum meter** for reading of vacuum / pressure during the operation of Unit
- 10. Drainage valve** a spherical valve 1" used for drainage of transformer oil from the columns after the regeneration is finished.

- 11. Thermometer** It measures the oil temperature during the regeneration process.
- 12. Outlet valve** a spherical valve 1“ with special “Teflon” gaskets at the oil outlet of the Unit.
- 13. Control panel** it consists of fuses, contactors, electric motors electrical protection, protection relays, , main switch, internal wiring etc., for an automatic operation of the Unit.
- 14. Framework** a welded, sectional steel construction, which represents foundation for all described components of the Unit.
- 15. Electric equipment** consisting of driving motors for the gear pump and of internal wiring of the Unit. Suitable for three-phase, 50 Hz power supply. Unit is delivered with male CEE connection installed at the control panel.
- 16. Internal lines** Unit is equipped withth flexible internal oil lines (hoses) with quick couplings, for easier disconnection in order to rotate the columns and remove the regeneration soil.

INSTRUCTIONS FOR OPERATION

PREPARATION OF THE UNIT FOR OPERATION

1. Close all valves at the Unit;
2. Plug the Unit into the power supply source;
3. Connect oil hoses;
4. Fill the columns with regeneration soil;
5. Turn-on the main power switch;
6. Check the rotation direction by turning on of the pumps, in short intervals;
7. Turn-on the vacuum pump and start vacuuming of the columns (OPTIONAL);

TURNING-ON OF THE UNIT (COMMENCEMENT OF REGENERATION PROCESS)

8. When vacuum reaches approx. 95 %, pen the inlet and outlet valve and turn on the gear pump;
9. When regeneration process starts, slightly open the valves No. 7 in order to release trapped air from the columns;
10. Observe the process temperature via thermometer;
11. Observe the pressure on the mano-vacuometers (No. 9) installed at the columns;
12. Observe the oil flow at the flowmeter;

UNIT SHUT DOWN

13. When the regeneration is finished, turn-off the Unit;
14. Close the inlet and outlet valve No. 1;
15. Drain the oil from the columns using the valves No. 10
16. Switch of the main switch;
17. Disconnect the power supply.

ANOTATION:

It is important to emphasize that inlet and outlet valves (No. 1, 2 and 12) should NEVER BE CLOSED if the Unit is running. This is important to avoid he pressure rise inside the system.