

1. Unpacking

The standard supply range of **TitroLine *alpha*** consists of: the basic unit with either an 10, 20 or 50 ml dosing unit, operating software, power unit and mains cable, stirrer cable and mini keyboard. If the Memory card containing the operating has not been installed, install it according to manual. Afterwards power unit and keyboard can be connected.

2. Installation of the stand bar

Accessory set TZ 1850 contains a black stand bar support and a stand bar which can be mounted to the bottom plate of the titration unit.

3. Connection of a stirrer

Magnetic Stirrer TM 125 or Overhead Stirrer TM 128 can be mounted to the stand bar.

Connect cable TZ 1583 between connection socket "Titrator" of the magnetic stirrer and socket "stirrer" of TitroLine *alpha*. Additionally connect the power unit of the stirrer to the socket "Netz / Power".

The knob for the rotation speed should be pre-set to half range.

The supplied power unit provides the energy for the Overhead Stirrer TM 128. A control signal from the titrator is not assigned. The rotation speed of the stirrer can be adjusted via the knob aside.

4. Connection of electrodes

The electrode clamp is to be pushed over the stand above the stirrer. Indicator and combination electrodes will be connected with their electrodes cable (i. e. K1A for electrodes with plug head) to the DIN socket "Elect.". If a separate reference electrode is used (i. e. B 3520 with cable B1N) connect it to the "Ref." socket.

Double platinum electrodes, i. e. for water determination according Karl-Fischer, will be connected via cable K1NN to the sockets signed with "KF".

If a temperature sensor is used, connect it to the sockets signed with "Pt 1000".

5. Connection of burette tip and titrating agent bottle (TZ 1850)

The burette tip will be connected to the tube showing to the front of the unit. The tube located behind will be connected to the adapter of the glass bottle. **All screw fittings should only be tightened manually.** The glass screw fittings will be damaged by force. The valve-tubing system must be tight. No air entering through a leak must be allowed. The influence of air moisture on the titrating agent can be avoided with a moisture trap filled with desiccant.

6. Filling of the dosing unit

Place a vessel under the burette tip. Switch on the instrument. The "unit check function" will be shown on the display. During this display push the <Fill> button on the keyboard. The rinse-program will be started. The titrating agent will be drawn from the glass bottle into the cylinder and towards the burette tip. Continue rinsing until no air bubbles will be drawn anymore out of the tip and the cylinder is filled completely. Again check the tightness of all screw fittings carefully.

7. The complete configuration for pH measurements is shown here:

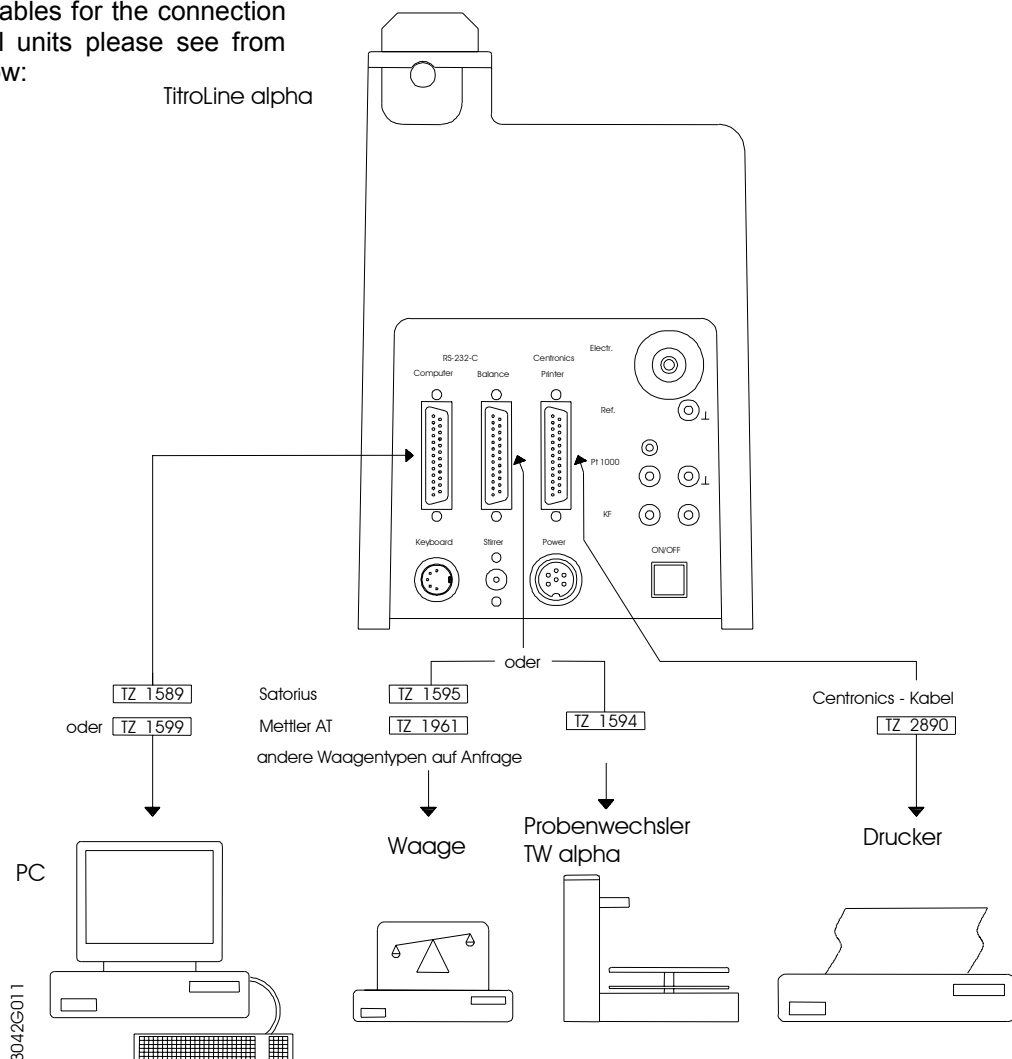


TitroLine *alpha*
with stirrer, bottle for titrating reagent, keyboard and printer.



8. Connection of printer, balance, Titration Sample Changer TW *alpha* or PC

Necessary cables for the connection of peripheral units please see from drawing below:



If the Titration Sample Changer TW *alpha* is connected to the TitroLine *alpha* RS 232 Port "Balance" the balance should be connected at the RS 232 Port No. 2 of the Sample Changer.

Please notify: If a keyboard, printer or balance has been connected with TitroLine *alpha*, the titrator must be switched off and on again to start an initialization of the system.

9. Karl-Fischer titration with Titration Stand TM KF and titrating vessel TZ 1770



- Replace the mounted titration tube at the TitroLine *alpha* with the titration tube from the Karl-Fischer titration vessel.
- The moisture trap must be filled with molecular sieve and connected to the standard taper NS 14.5 of the titration vessel.
- Connect the double platinum electrode TZ 1106 to the standard taper NS 7.5 of the titration vessel and to the KF plug of the TitroLine *alpha*.
- Please have a look at the operating manual TM KF.



The complete configuration for Karl-Fischer titration is shown here:



Interchangeable dosing units for TitroLine *alpha*

TitroLine *alpha* is being delivered with either a 10, 20 or 50 ml dosing unit. If titrations with different titration agents shall be performed, the dosing units can be changed easily. It is also possible to use dosing units with different volumes of the burette cylinder.

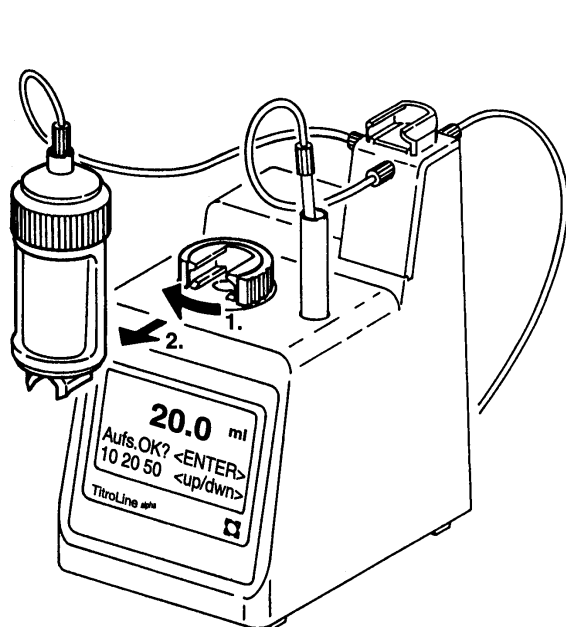


Fig. 1
Removing the dosing unit from
the driving mechanism

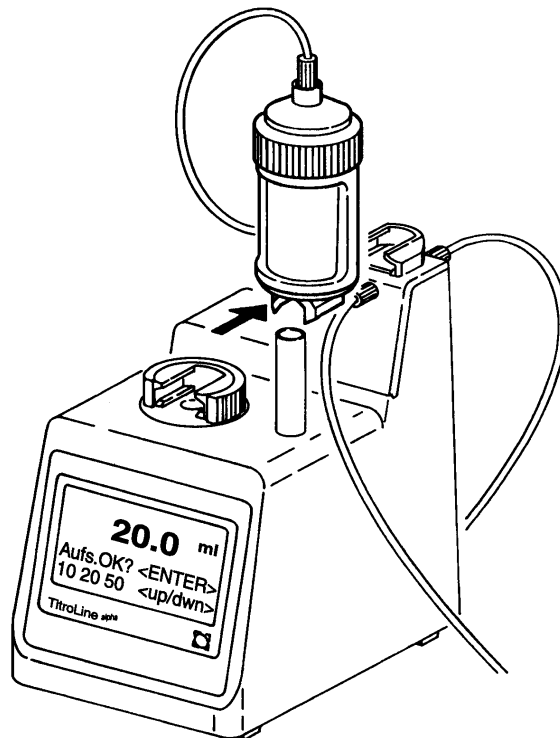


Fig. 2
Moving of the dosing unit to the valve holder

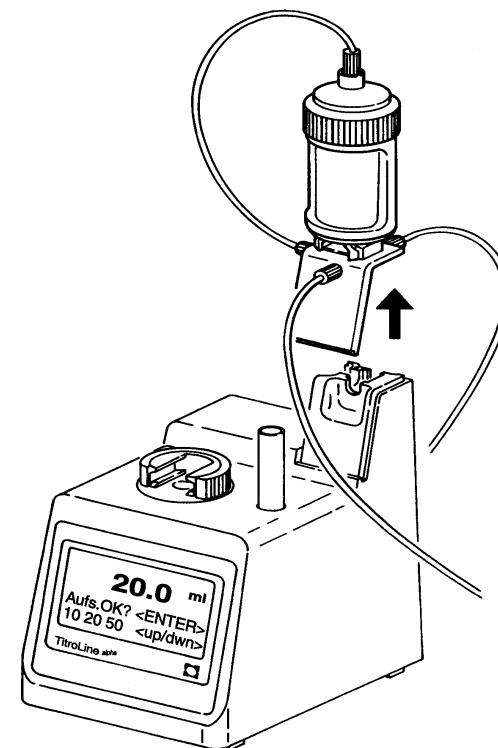


Fig. 3
Exchange of dosing unit with valve holder and fixed valve

After this the new dosing unit can be installed in reversed sequence. If another dosing volume is being used, it must be entered via the menu of the TitroLine *alpha* (unit check after switching on the instrument).

