

Metrohm AG is a worldwide leading supplier for ion analysis. In Herisau (Switzerland), Metrohm develops and produces instruments for analysis techniques, such as titration, ion chromatography, voltammetry, and ion measurement.

Demands on Technical Documentation

High demands on the reliability and usability of Metrohm AG's instruments also include high demands on product documentation. The Teachware department at Metrohm AG creates instruction manuals that help the user handle the instruments correctly. In this context, technical illustration plays a significant role.

3D CAD data in Technical Documentation

Previously, those illustrations had been newly created with the help of common 2D graphics software. In this process, existing 2D or 3D design data could only be implemented at a limited basis, if at all. The wish for a simpler and faster method for the re-use of 3D design data and their conversion into perspective 2D illustrations led to the acquisition of ITEDO's software IsoDraw and IsoDraw CADprocess two years ago.

The employment of CADprocess was meant to save them from the extensive effort of drawing complex instrument views totally new. After all, it had been hard to accept that the existing data of the instruments and the mountings, which had already been completely drawn in 3D, could not be used for documentation.



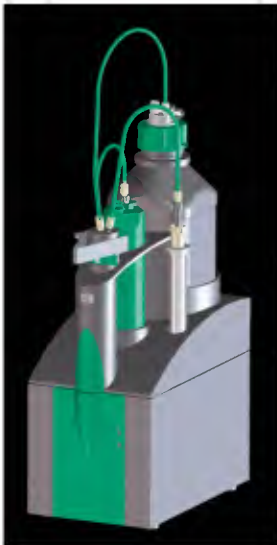
"CADprocess allows us to import 3D design data directly via the IGES format. This possibility saves us a lot of time. Apart from that, we are now able to create much more detailed illustrations, which we could not realize in the past because of the extensive effort."

Ulrich Pinkernell, PhD
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A typical example is the illustration of the Titrande, Metrohm's latest development of an automatic titration system. One version of this instrument consists of a measuring and control unit on which the so-called exchange unit is placed. Apart from the reagent bottle and diverse tube connections, the latter also contains a dosing cylinder of a specific volume.

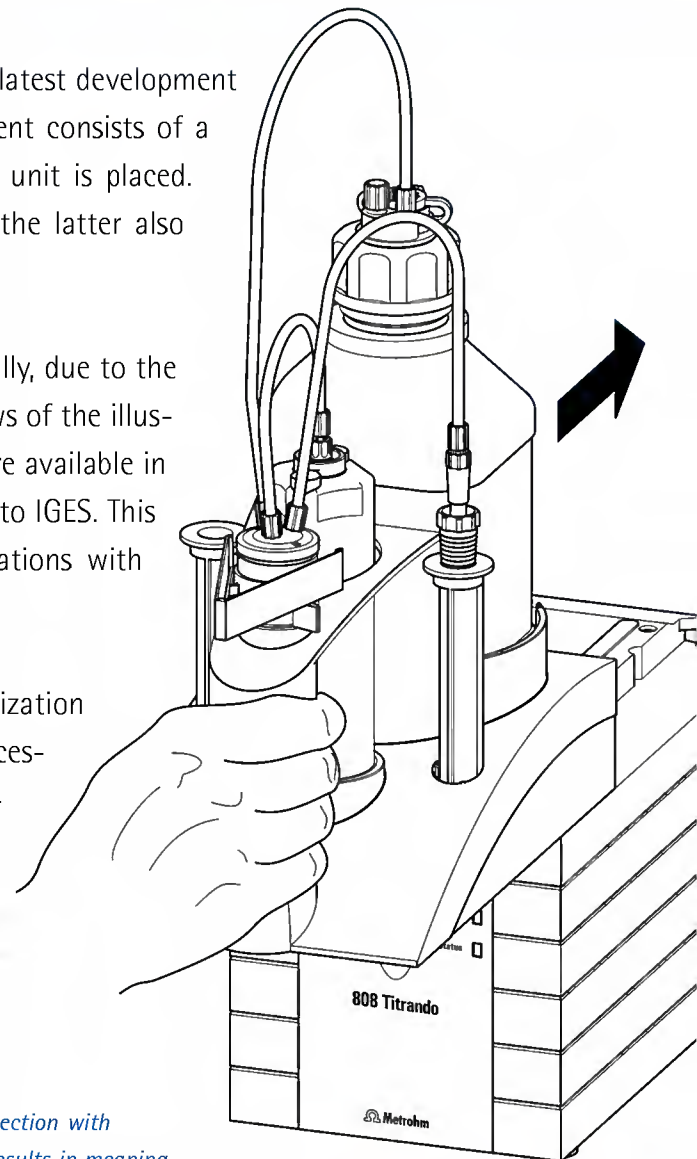
It would be an enormous effort to draw this instrument manually, due to the high number of small parts that are needed for the various views of the illustration. Since the 3D data of all parts are available in SOLID DESIGNER, they can be exported to IGES. This data is then converted into 2D illustrations with IsoDraw 5 CADprocess.



3D view of the Titrande in Solid Designer

Some minor editing, respectively optimization of the illustrations, is occasionally necessary. For example, curved surfaces or filleted corners sometimes need little corrections. However, these are the exact spots that would cause the most problems in manual drawing, anyway.

"Overall, the implementation of IsoDraw 5 in connection with CADprocess greatly relieves our work load, which results in meaningful illustrations and allows a more effective allocation of resources," concludes Ulrich Pinkernell.



titrande®