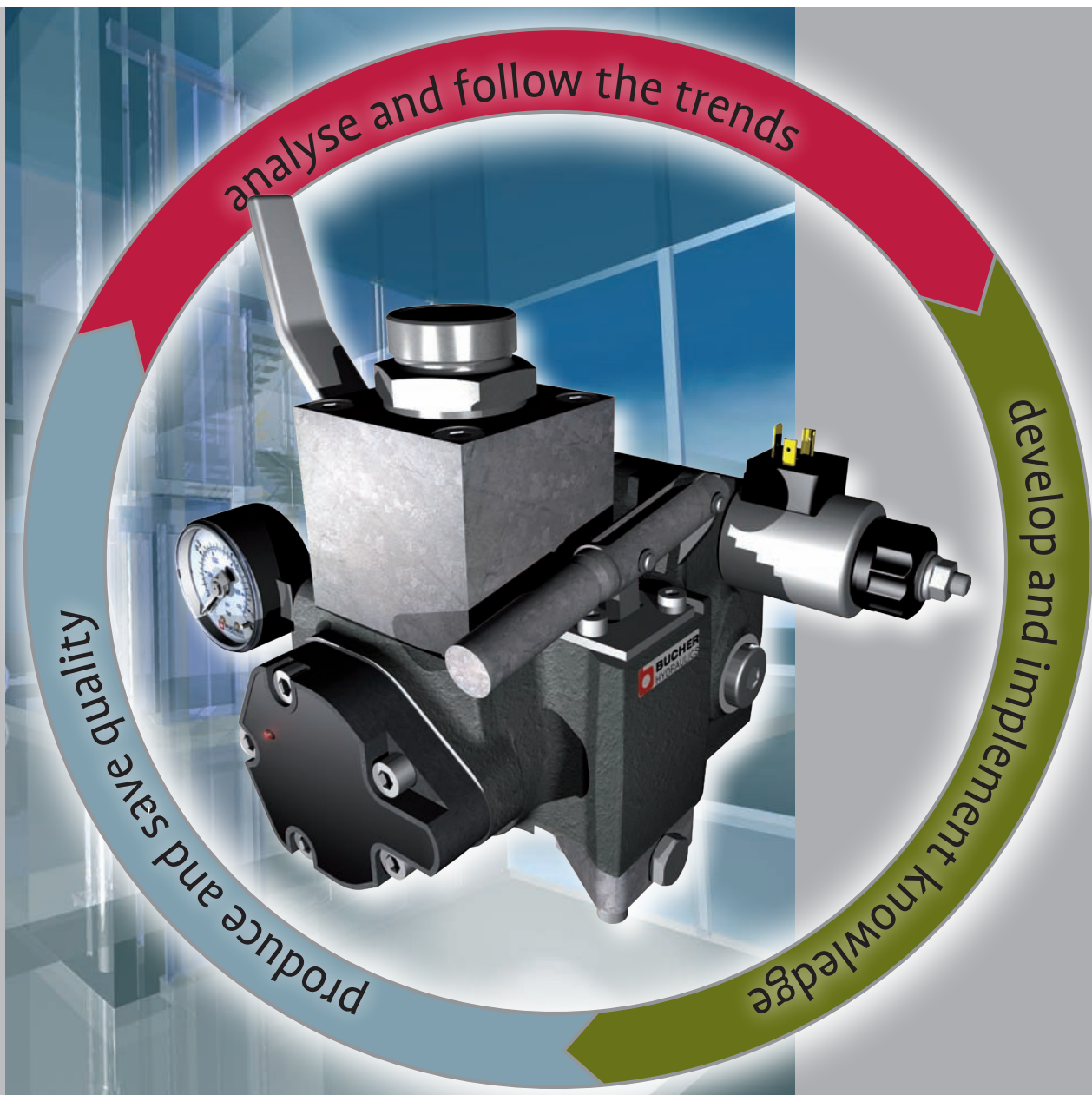


iValve

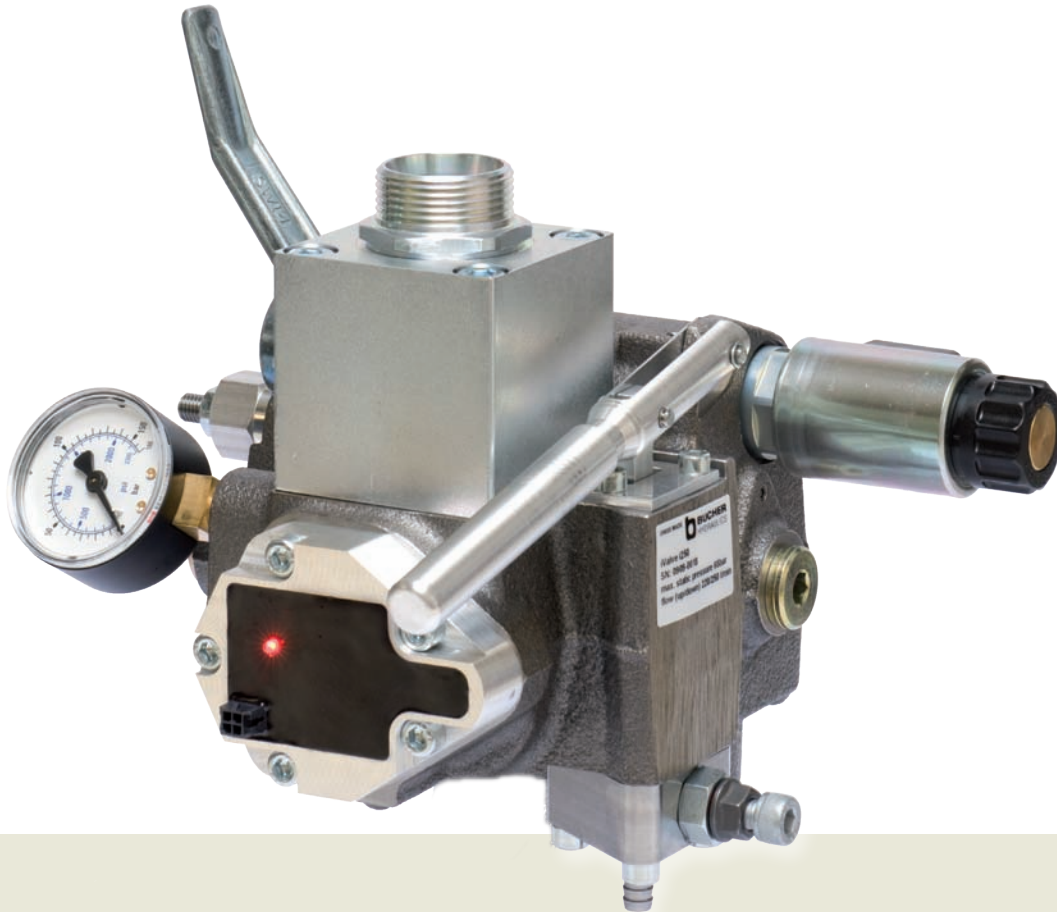
The intelligent valve and its background



iValve

The intelligent valve

Here is the new iValve!



iTeach: valve adjusts itself

The iValve adjusts its parameters itself during the first rides.

- No need for interminable setting of complex parameters anymore!
- Your staff do not have to be hydraulic professionals for a fast, advantageous and save installation
- Anybody can set the iValve - no hydraulic experience is required!

iAccess und iMonitoring: Remote Management and Condition Monitoring (optional)

The iValve monitors itself, delivers prognosis and it can do all that online.

- You know what has to be done at what point of time (e.g. time left until cleaning an oil filter)
- You save redundant service visits and follow-up services!
- You only do what is needed and satisfy the end customer!

analyse and follow the trends

Customer service / Sales



Broad interviews with our customers and sensibility in talks leads us to the conclusion, that these are the major trends in hydraulic elevator business:

Competence and hydraulic experience is decreasing on site. Service Margins are shrinking, and operation areas are enlarging and therefore remote access is demanded more and more.

Thus, the specifications of a new valve are these:

- **no complicated setting of parameters**
- **simple installation without any hydraulic knowledge**
- **remote access has to be possible**

Our Customer Service Department are responding to the demand for professional hydraulic training and have developed a Mobile Training unit that enables us to train our customers on their own premises with a high practical bias. Most courses are fully booked after a short time .

Result:

Marketing specifications
Training Mobile

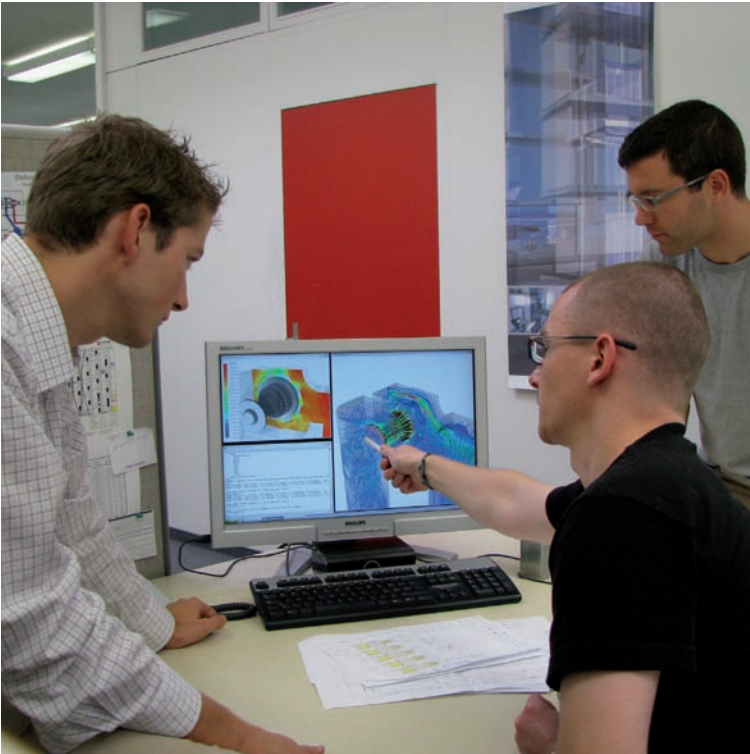


**P. Roose, Service Manager Germany,
Responsible for training and education:**

„People are enthusiastic - everywhere I stop with our Training Mobile! I drive up in front of our customers' house. Thanks to the lift simulator the technicians and service staff are able to manipulate on a real installation and see the effects seconds later! I could open the eyes of many yet.“

develop and implement knowledge

Research and Development



Taking the high demands of the sales department, technology is challenged. They can resort to more than 50 highly qualified staff members. Research and development is centralized at Bucher Hydraulics AG, Neuheim and therefore exchanges and shares knowledge, findings and experience of all departments (Elevator, Mobile Hydraulics and High Voltage Switch Gears).

The construction creates a new product virtually on the screen and can form different functionalities and designs.

By complex computing simulation programs we test the product before it even exists. We identify prematurely possible deformation and stress, vibration, flow directions, pressure conditions, action of force and development of heat.

Result:

Sophisticated prototype



M. Perelli, Calculation Engineer:

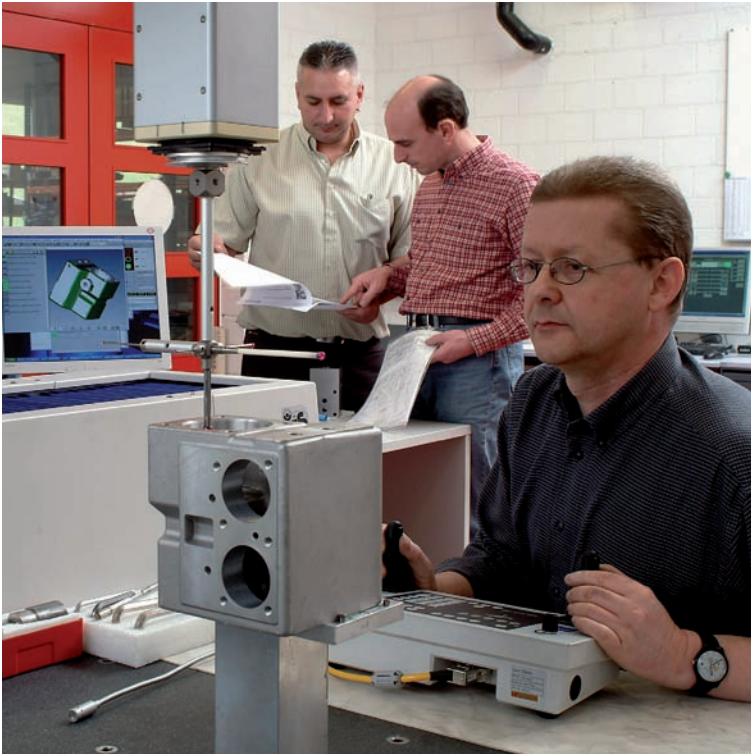
„Here you see I have calculated the model with CFD (Computational Flow Dynamics). The flow lines are coloured, depending on their speed: blue means low and red means high flow speed.

In this 3D - view you can easily recognise e.g. turbulences with bad influence. I made some constructive changes to avoid them.

With this program, by the way, new Formula 1 race cars are optimised.“

produce and save quality

Quality Management



As soon as a new valve is being started in **production**, numerous quality controls grant that our customers as usual receive faultless products with a long guaranty:

All internal manufactured valve components are being checked by **measuring instruments**. Additionally, a control sample of all internal and external components is taken and measured by one of the **high-precision measuring machine**.

Before it leaves our house, every single valve is being tested on the **dynamometer** under real conditions!

Every measurement is being recorded, saved and stays traceable.

The **measurement equipment monitoring** finally surveys and calibrates the ca. 2000 different measuring instruments continuously.

Result:

high-precision quality product



E. Feissli, Technician in Measurement Technology:

„This 3D measurment machine of Zeiss not only gauges in length, width, hight and depth, but form and positional tolerances, e.g. the coaxial shape of boreholes. And this accurate to one micrometer ($1 \mu\text{m} = 1/1000 \text{ mm}$)! If one hair of mine falls into the valve, it produces an alarm message instantly. A hair is around 50 micrometer thick.“

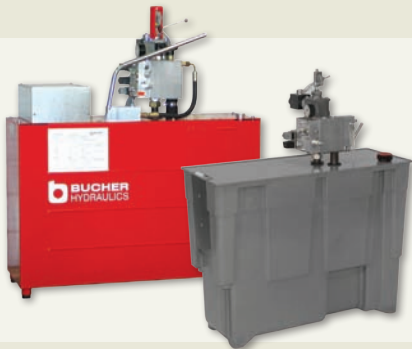
Products

The Bucher Hydraulics range



Electronically controlled lift valves (LRV)

Bucher Hydraulics lift control valves provide unsurpassed ride comfort, irrespective of load and temperature. All lift control valves are factory preset to the installation-specific parameters. This reduces the on-site installation time to the minimum.



Power units

Compact Line: the good-value package solution with the innovative synthetic tank and the C-LRV electronically controlled lift valve.

Comfort Line: the standard power unit with the LRV-1 electronically controlled lift valve offers unlimited application possibilities and numerous options.

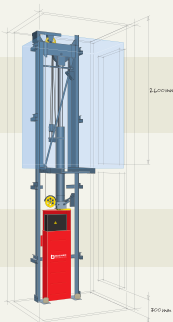
Economy Line: the high-performance, economical, and low-noise drive solution with the VF-LRV electronically controlled lift valve reduces energy consumption by up to 80% in comparison with mechanically controlled hydraulic lift installations.



Frame kits

Pluto: The range of side-ram frame kits is suited for hydraulic passenger and goods/passenger lifts with payloads up to 1,600 kg.

Jupiter: The range of tandem-frame kits is suited for hydraulic goods/passenger lifts with payloads up to 6,000 kg.



MRL-drive systems (machine room-less)

Tiger: the best system for the optimum shaft utilisation.



Modernisation

MULTIKIT: the route to perfect modernisation of a hydraulic lift drive, without time-consuming and costly replacement of the lift controller.



Cylinders

Versatile, robust and reliable.

Bucher Hydraulics AG

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