

# **BUCHER** hydraulics


BUCHER PRODUCTS AVAILABLE FROM HYDRATEC

## **BUCHER POWER UNIT SERIES COMFORT LINE, ECO LINE**



*12 months  
on-site warranty*

All our work comes with the assurance that any callbacks are covered including parts and labour

 Our engineers are certified First Aiders so can even work when the site First Aider is absent



## BUCHER POWER UNITS SERIES COMFORT LINE

The hydraulic power unit with the electronic iValve guarantees maximum ride comfort, independent of load and temperature. The many options available allow it to be used in a wide range of locations, from new buildings to modernisation.

The Comfort Line can be supplied for hydraulic elevators for any required total loads and travel heights up to 25 m.

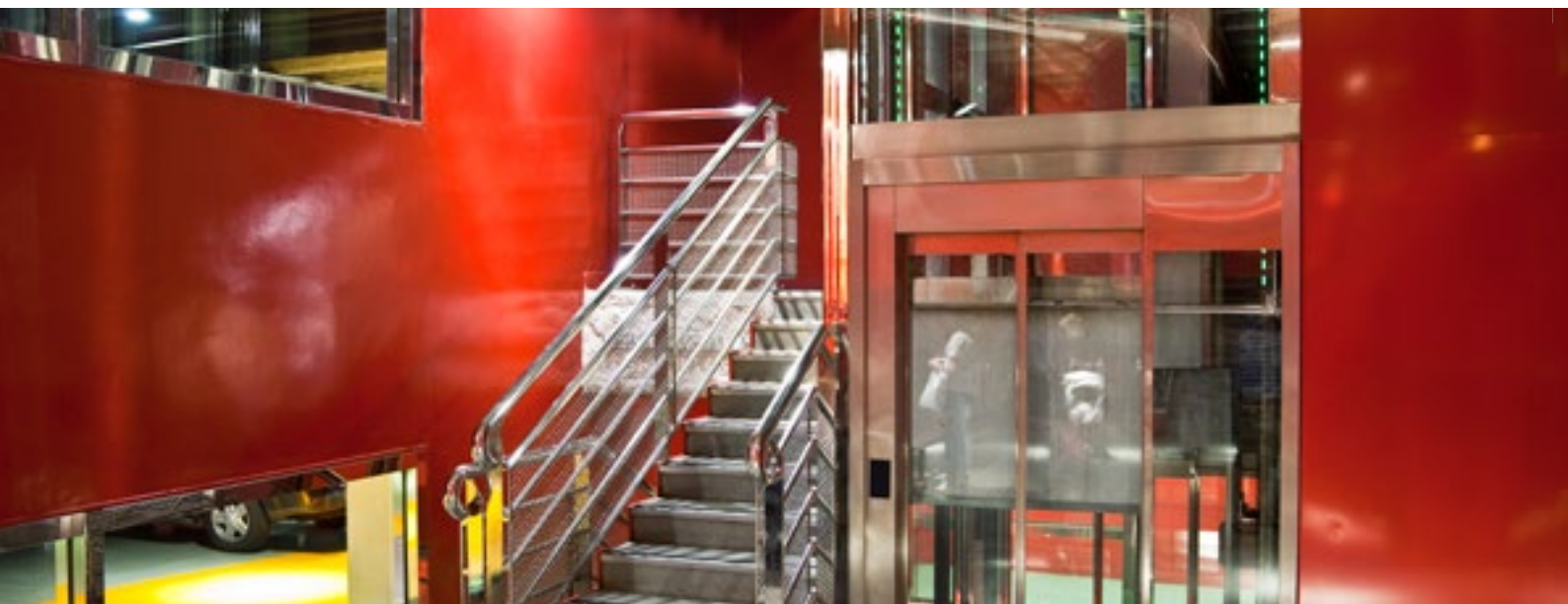


### ADVANTAGES

- Straightforward, compact design and construction
- Optimised tank sizes, tailored to the floor area
- Constant travel times, even with changes in load and temperature
- Low energy costs
- Wide operating temperature range
- Short total travel time due to the short slow speed travel
- In only a few cases does the oil need to be cooled
- Down speeds can be increased by up to 50 % at no extra cost and without loss of comfort

### BENEFITS FOR YOU

- Short commissioning time thanks to the "iTeach algorithm"
- Outstanding travel characteristics in the widest possible range of conditions
- Short set-up time
- Freedom of planning for architects, thanks to flexible positioning of drive system

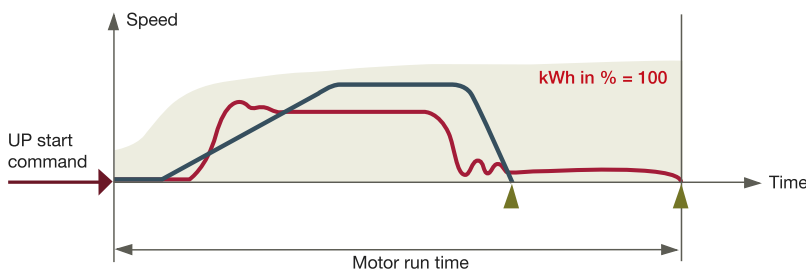


**ELECTRONICALLY CONTROLLED iVALVE**

The graph below impressively illustrates the stability of the travel curve from the electronic iValve, independent of the operating condition.

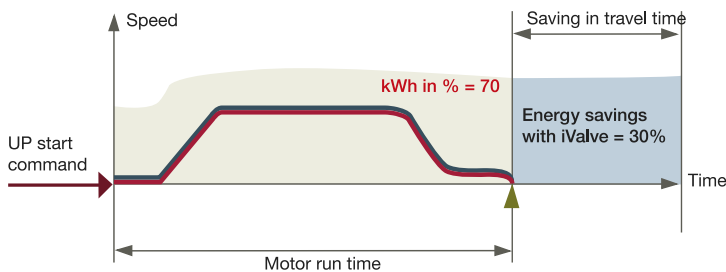


Mechanically regulated lift valve



Energy consumption  
Lower landing  
Upper landing

iValve the electronically controlled lift valve from Bucher Hydraulics



Energy savings with iValve = 30%  
Empty car and cold oil (Oil HLP 46 at 10°C)  
Full load and hot oil (Oil HLP 46 at 60°C)

**CONTROLLER iCon AND ParamCard**

- The iCon features the latest digital technology, complete with a range of interfaces for external peripheral equipment
- Any required number of option boards can be seated on the iCon:
- The system is open for any kind of interfaces and technologies that exist now and in future
- iCon and iValve are not tied to a specific installation, and can be exchanged
- Data for the installation are saved on the ParamCard and can be quickly and simply



- transferred to other installations without any other settings
- Adjustments, supervisory operations and monitoring are possible via an external PC or handterminal

**COMFORT LINE VARIATIONS**

Wide variations for a broad range of applications  
Thanks to the high flexibility, most customer wishes  
can be satisfied and technical demands fulfilled.

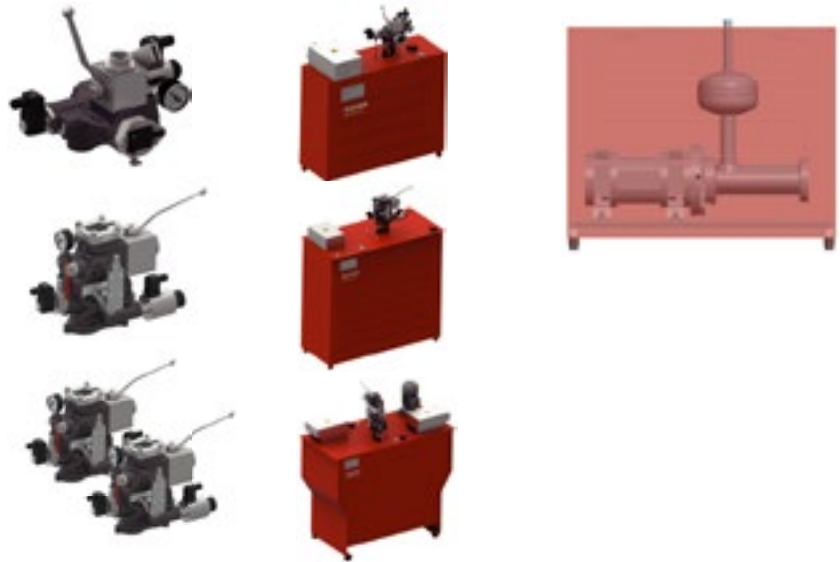
Valve sizes  
30 – 500l/min

Power unit sizes  
150 – 1 400 Liter

Numerous drive  
combinations

**VARIOUS OPTIONS**

- Further pressure switch outputs
- Soft starter
- Releveling unit
- Visual oil level gauge
- Oil heating
- Oil cooling
- Oil spillage tray
- Level switch
- Thermostat
- Bypass for testing the pipe-rupture valve
- Handterminal
- PC software
- Interconnecting pipe/hose for multiple power units

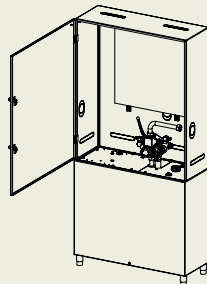


Modular design provides the suitable solution

← Additional accessories available on request

Suitable for the following power units:

Control cabinet



UDA 150  
with integrated oil spillage tray

Machine room cabines

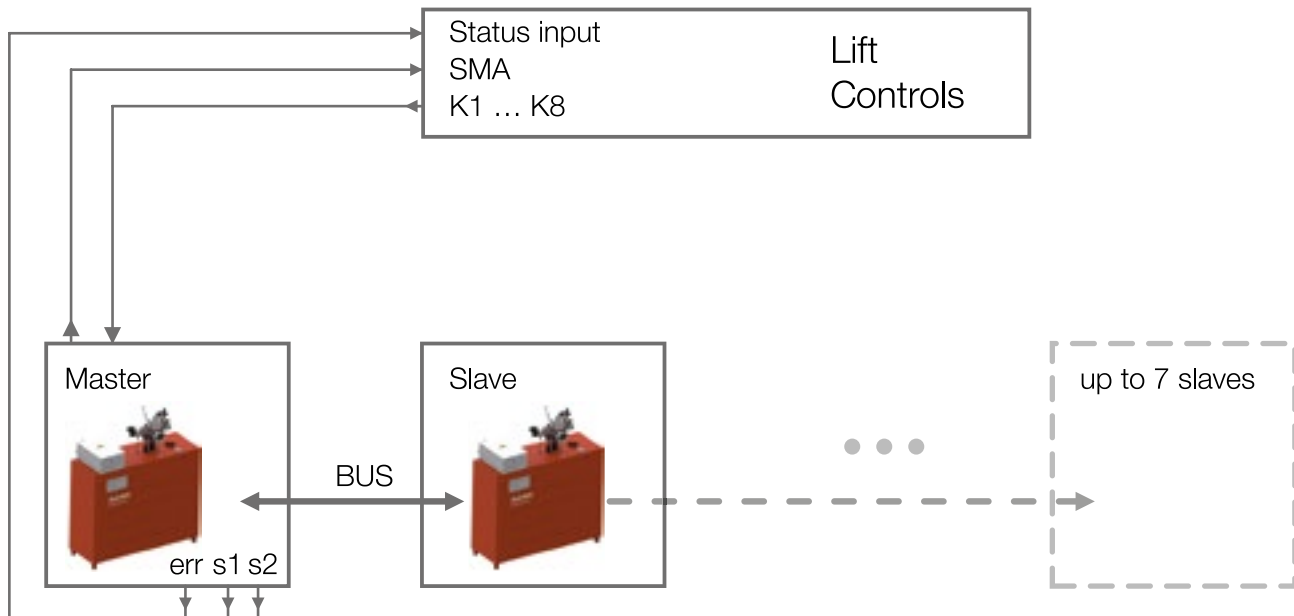


UDA 150  
UDA 230  
UDA 350

**COMFORT LINE – MULTiValve**

**MULTiValve**

- Several iValves can be controlled via the master-slave concept
- Electrical supply rating can be reduced without frequency inverter
- Easy wiring
- On demand, the lift can be operated with just one drive, at reduced speed



**MULTiValve Power Unit**

- Power unit with two drives and output flow up to 1000 l/min
- Drives can be operated independently
- Each drive can be fitted with a soft-starter



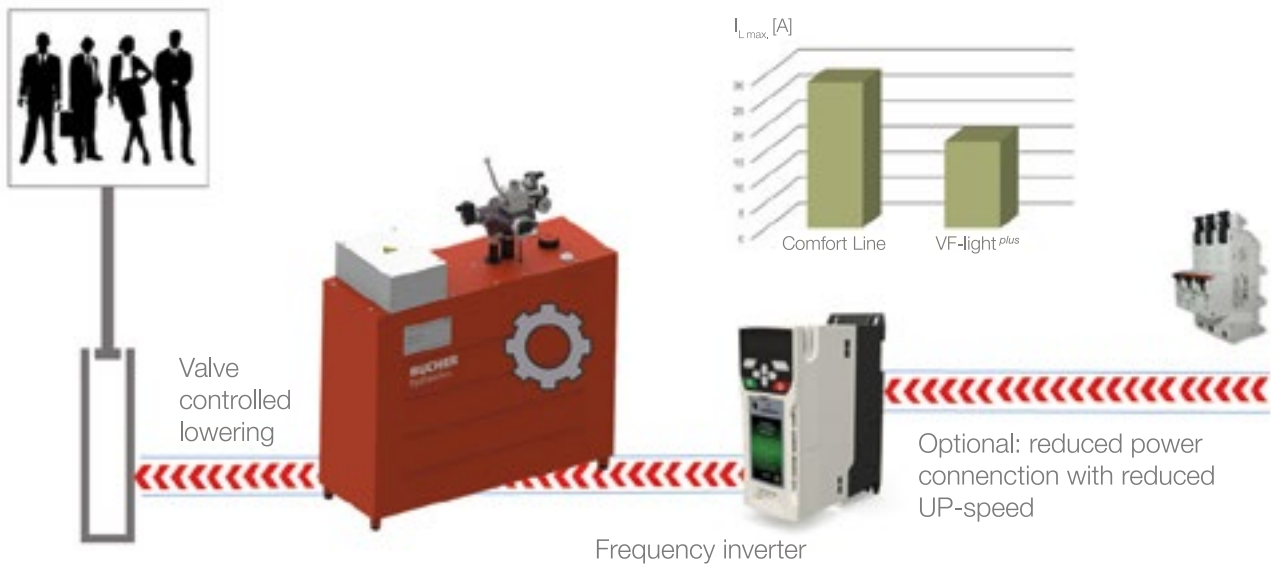
**COMFORT LINE – VF-light AND VF-light<sup>plus</sup>**  
Frequency-controlled drive in UP direction

**VF-light**

- Constant UP speed, regardless of the car load
- Electrical supply rating is based on the maximum speed and load
- “No contactors” design can be implemented

**VF-light<sup>plus</sup>**

- Constant electrical power demand, regardless of the car load
- Variable UP speed, dependent on the car load
- Electrical supply rating is based on the nominal speed at 10% payload
- “No contactors” design can be implemented



## BUCHER POWER UNITS SERIES ECO LINE

**Frequency-controlled drive in UP and DOWN direction**

### Save up to 60 % energy

- Continuous short travel curve, independent of load and temperature thanks to VVVF technology
- Up to 200 rides per hour are possible without oil cooler and costly machine-room ventilation

### Up to 10 dBA quieter

- The VVVF drive minimizes bypassing sounds
- Optional operation without motor contactors

### Minimal installation effort

- No more settings of hydraulic parameters required
- The self-teaching algorithm „iTeach“ provides the shortest travel curve autonomously

### Highest safety

- Always an accurate positioning of  $\pm 3$  mm,
- to prevent trip hazard
- The self-monitoring function guarantees fully
- integrated A3 compliance (TÜV-certified)



### Maximum ride comfort, minimal travel time

- No start lag, fast and smooth ride curve, short and consistent slow-speed travels
- The soft-stop function allows almost direct landing

### Options

- Up to 40 % lower mains power rating and up to 20 % cheaper with Eco Lineplus
- Further reduction of installation and maintenance costs through operation without motor contactors (TÜV-certified)
- Regeneration package available to feed up to 30% of the drive energy back into the grid or SuperCap

**With iValve & VVVF drive technology**



**ECO LINE<sup>plus</sup>**

Continuous current, load-dependent speed reduction

**Reduce mains power rating and costs**

**ADDITIONAL ADVANTAGES**

**Up to 40% lower mains power rating**

With Eco Lineplus we offer the possibility to define a load-dependent travel speed: With heavy car loading the UP ride is reduced. Therefore the maximum mains power rating does not have to meet the demands of maximum car loading at maximum speed. The maximum mains power rating can be significantly reduced - this can amount up to 40%! Travel DOWN remains constant at the nominal speed.

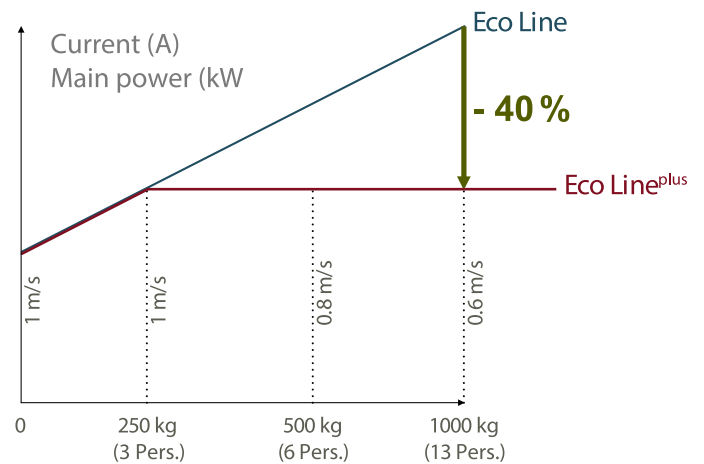
**Up to 20 % cost savings**

Not only the mains power rating is reduced considerably, the frequency inverter as well as other components can be configured smaller, too. Thus, the cost can be reduced up to another 20%.

In this example with Eco Lineplus the mains power rating can be reduced by 40% compared with our standard Eco Line.

With a car loading of 1 000 kg, the lift now rides with a reduced speed of 0.6 m/s instead of 1 m/s.

This graph shows the reduction of mains power rating of a typical lift that can be realised with this option:





## ECO LINE

Unmatched hydraulic efficiency

The powerful, economical and low-noise drive solutions with reduced energy consumption of as much as 80%.

There are several variants of the Eco Line:

- Eco Line
- Eco Line<sup>plus</sup>
- Eco Line with SuperCap
- Eco Line with Regeneration

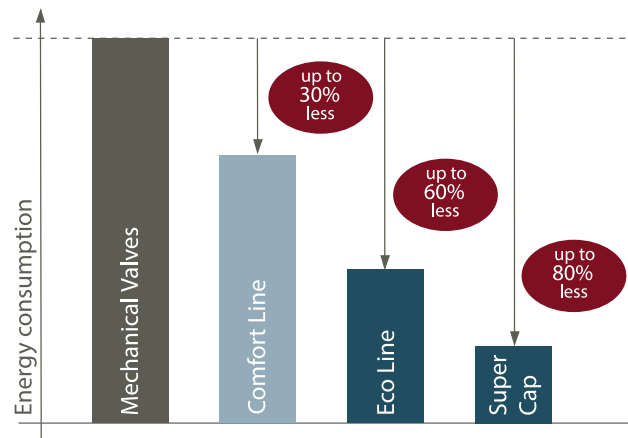
### Variable-frequency technology

Your investment in VVVF technology easily pays for itself.

We will be pleased to calculate the possible energy – and cost-savings for an actual project!

### Years of experience

Thousands of Bucher Hydraulics VF drive systems have been in successful operation since 1998



### Further advantages of variable frequency drives

The combination of electronic iValve and the frequency inverter allows for absolutely perfect ride characteristics:

- Stopping accuracy  $\pm 3$  mm in UP and DOWN directions
- No start lag, fast and smooth start
- Start current limited without soft starter

### Optional

- Further reduction of installation and maintenance costs  
> operation without motor contactors (TÜV-certified)
- Max. reduction of power connection  
> load dependent speed control (limits current required)
- Regeneration package available to feed up to 30% of the drive energy back into the grid or SuperCap

**SuperCap**  
Eco Line

**Eco Line with SuperCap**

Future-proofed solutions with reduced electrical power demand

There are several variants of the Eco Line:

- Constant power rating by reducing the speed as the load increases
- Rating of the electrical supply can be reduced



System visualisation shows downward travel



## The Bucher Hydraulics Range Products

### Electronically controlled lift valves (iValve)

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

#### Comfort Line

The standard power unit with the iValve electronically controlled lift valve offers unlimited application possibilities and numerous options.

#### Eco Line

The high-performance, economical, and low-noise drive solution with the VF-iValve electronically controlled lift valve reduces energy consumption by up to 80 % in comparison with mechanically controlled hydraulic lift drives.

### Frame Kits

#### Pluto

The range of side-ram frame kits is suited for hydraulic passenger and goods/passenger lifts with payloads up to 1600 kg.

#### Jupiter

The range of tandem-frame kits is suited for hydraulic goods/passenger lifts with payloads up to 6000 kg.

#### MRL-drive systems (machine room-less)

**Tiger:** The best system for optimised shaft utilisation with greater design freedom:  
The shaft pit can be as low as 300 mm and the shaft head as low as 2600 mm.

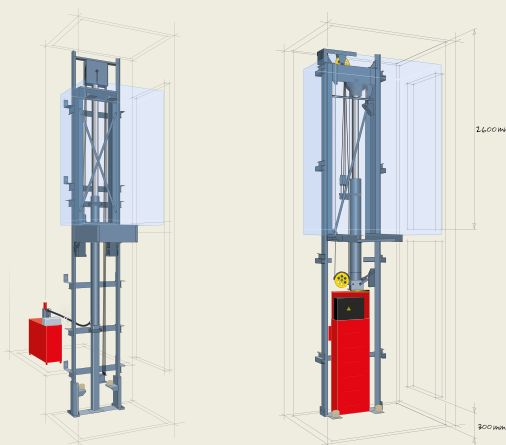
### Modernisation

#### Comfort Line

The standard power unit with the iValve electronically controlled lift valve offers unlimited application possibilities and numerous options.

#### Eco Line

The high-performance, economical, and low-noise drive solution with the VF-iValve electronically controlled lift valve reduces energy consumption by up to 80 % in comparison with mechanically controlled hydraulic lift drives.





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