

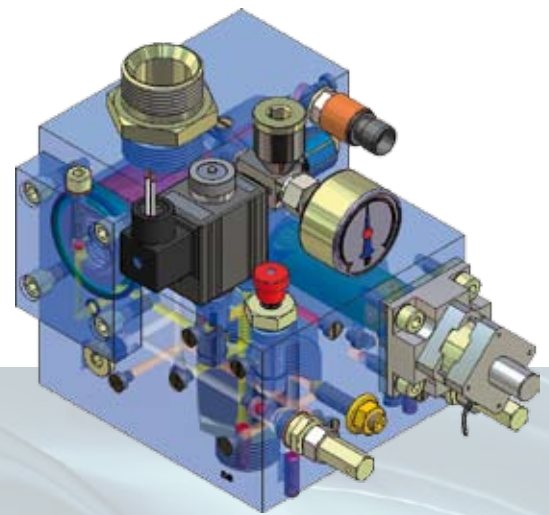
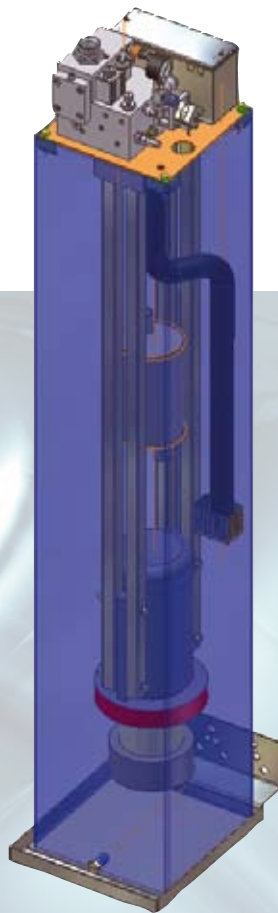
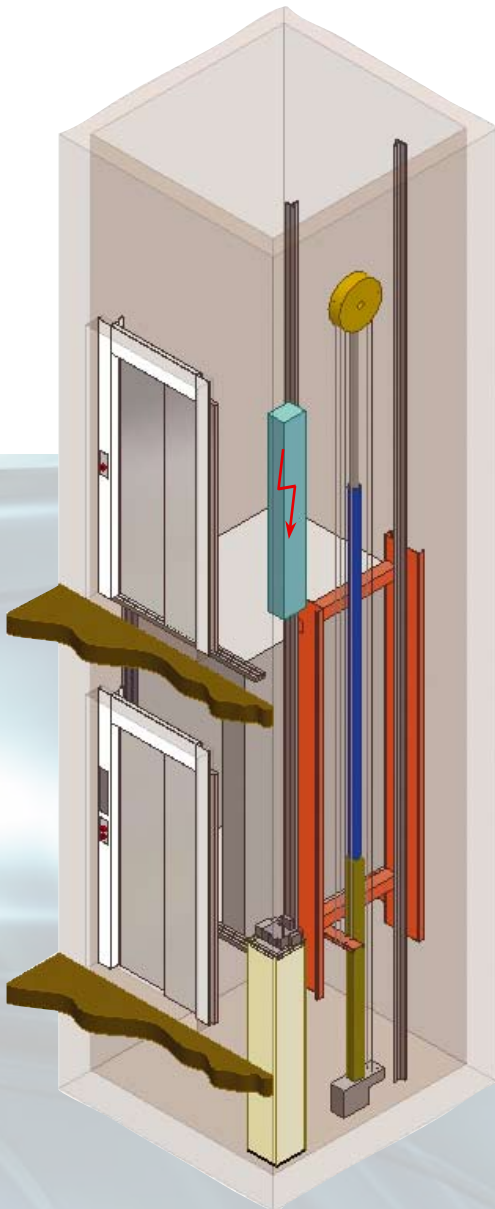


No. **1** in the world

with more than 650.000
hydraulic lift components installed

FROM HYDRAULIC TO FLUITRONIC DRIVE

Evolution of technology



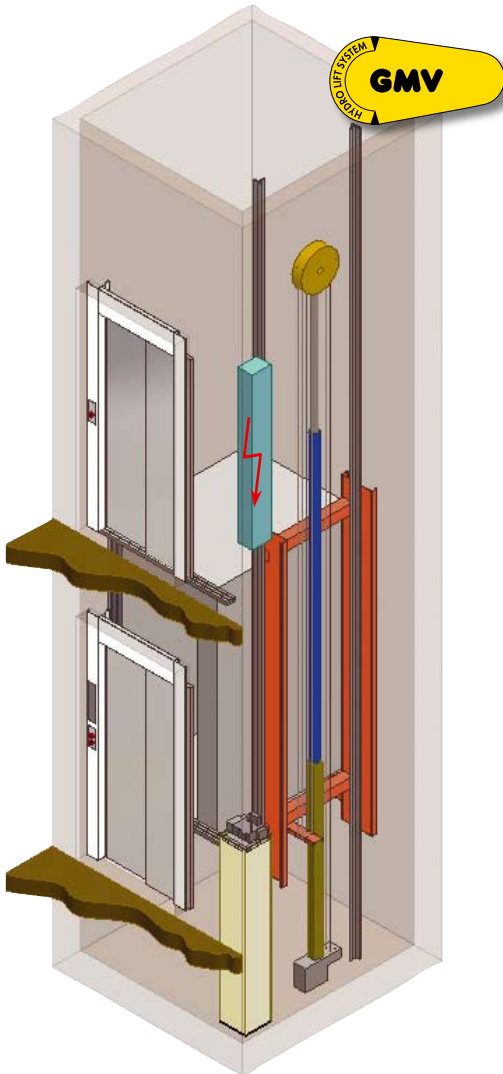
NEW FLUITRONIC LINE *and its MRL systems*

Electronically controlled
components in conjunction
with a new generation of
fluid, to answer today's market
requirements.

Supplied as single components,
kits or complete lift packages.

THE NEW GREEN LIFT LINE WITH FLUITRONIC COMPONENTS

The best and most competitive lifts within the 6 stop range: available in MRL-machinery cabinet – machine room less – with reduced pit and overhead – MRL with reduced pit and overhead – Home Lift versions.



*Green Lift - Fluitronic
MRL-T*

ADVANTAGES of Green Lift - Fluitronic MRL-T:

ADVANTAGES FOR BUILDER AND OWNER

- ➔ More economic for system up to 6 stops
- ➔ Reduced overall shaft dimensions
- ➔ Reduced maintenance cost
- ➔ More safety in case of seismic events
- ➔ Environmental friendly and low consumption cost
- ➔ A major brand name to increase the building prestige

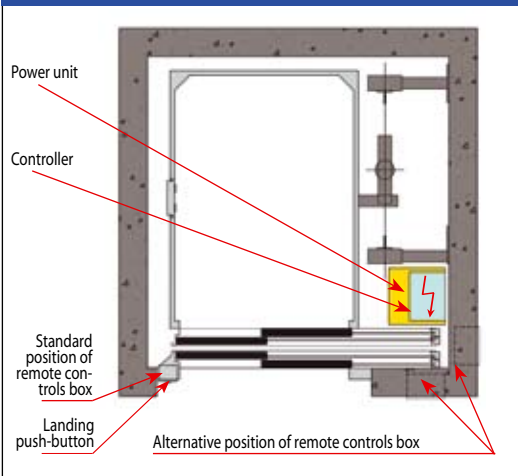
ADVANTAGES FOR LIFT AND MAINTENANCE COMPANY

- ➔ Simpler and safe assembly – reduced time (absence of counterweight and its guide rails – low placing of the power unit)
- ➔ Accessibility from the pit or from the landing floor
- ➔ Technology and wide product range
- ➔ Low material cost and easily accessible spare parts

ADVANTAGES FOR END USER

- ➔ Wide range of finishing
- ➔ Easy operation of manual lowering system in a short time by properly trained personnel (it is not required a qualified technician)
- ➔ Economical emergency lowering device with automatic door opening
- ➔ High level performance and ride quality
- ➔ Greatly reduced noise level

SHAFT PLAN OF GREEN LIFT - FLUITRONIC MRL-T



Green Lift – Fluitronic MRL-T is also available with pit and/or headroom with reduced dimension, with the following characteristic features:

- vertical power unit for MRL lift with reduced pit dimension
- pit and/or headroom with reduced dimension
- absence of damage in case of pit flooding

FLUITRONIC COMPONENTS

Ideal components to make high technology hydraulic (now fluitronic) lifts with a full product range: traditional machine room – machinery cabinet – machine room less-with reduced pit and overhead - MRL with reduced pit and overhead – Home Lift.

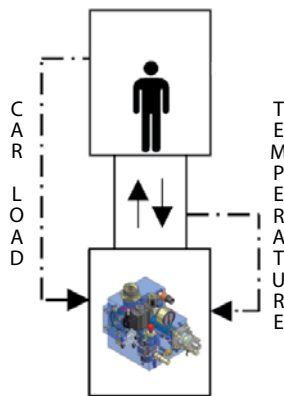
Environmentally friendly, reduction in power consumption, top level comfort, safety for users, installers and service engineers, best quality/price ratio.



NGV electronic valve

TWO DIFFERENT OPERATING CRITERIA

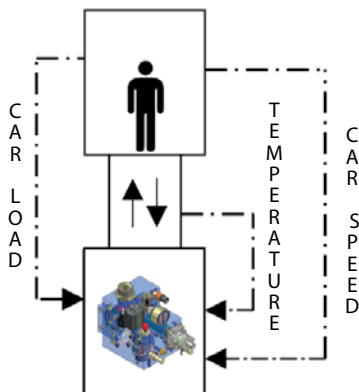
INTERNAL FEED-BACK



With simple interface on all existing and new lifts

ENERGY CONSUMPTION: MINUS 20%*

TOTAL FEED-BACK



The ideal choice when maximum comfort and top performances are essential requirements

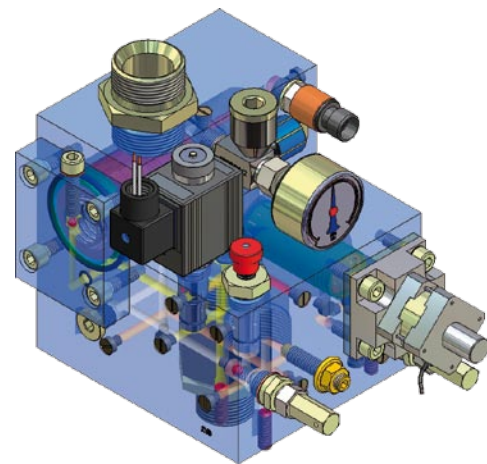
ENERGY CONSUMPTION: MINUS 30%*

* In comparison with a traditional valve

NEW FLUITRONIC TECHNOLOGY

the most advanced lift control system

- the lift motion is controlled by the **innovative NGV electronic valve with "stepping system" technology**
- **eco-fluids or mineral oil** can be used



NGV electronic valve

NGV ELECTRONIC VALVE ADVANTAGES

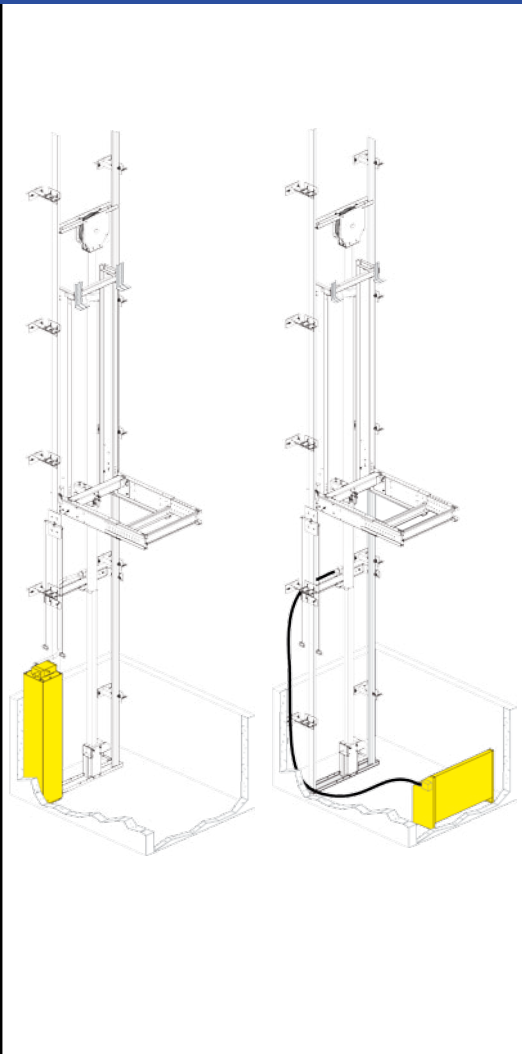
- Reduction in power requirements
- Power consumption cost limited to a few hundred euro/year in residential buildings
- Speed up to 1 m/s
- Possibility of downward speed up to 20% higher than upward speed
- Reduced fly-time
- Motion comfort equal to VVVF electric systems
- Constant down speed regardless of load
- Practically no need of heat exchangers
- Adjustable maintenance speed
- Pressures from 15 to 45 bar (from 2008 increase up to 60 bar)
- Possibility to use eco-fluids in compliance with new standards
- Designed for MRL applications

From hydraulic to fluitronic drive



MRL fluitronic power units

EXAMPLES OF UTILIZATION

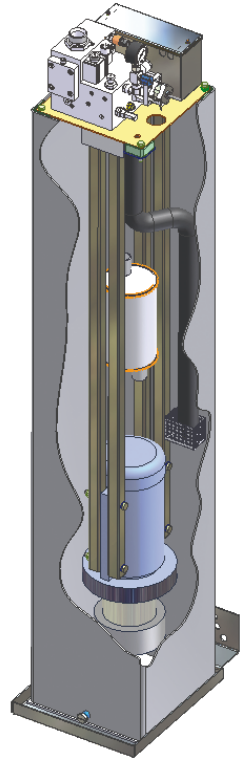


MRL-T FLUITRONIC POWER UNIT

It is a vertical power unit specifically designed for MRL lifts according to EN 81.2:1999/A2:2004 rules to be installed in the pit typically between the guide rail and door.

Key design features:

- ➔ shaft dimensions do not need to be increased
- ➔ reduced pit sizes for installation of lift in existing buildings (prEN 81.21)
- ➔ maintenance can be easily performed from the pit
- ➔ special attention has been given to reducing the noise, due to the location of the power unit
- ➔ pump flow range 55-210 l/min (with 50 Hz motors)
- ➔ lift capacities up to 630 kg (0,63 m/s)
- ➔ travel up to 17 m
- ➔ suitable for those areas with higher flooding risk



MRL-T fluitronic power unit

MRL-H FLUITRONIC POWER UNIT

The employment of this fluitronic power unit is an ideal solution for MRL lifts where it is difficult to use the MRL-T model. The refuge space has to be considered when selecting this type of fluitronic power unit per EN 81.2/A2 rules.



MRL-H fluitronic power unit

ECO-FLUIDS

GMV, together with power units, supplies an eco-fluid. This fluid is bio-degradable and non-toxic with superior characteristics if compared to mineral oils, in particular: higher temperature stability and higher fire resistance.

MRL-T and MRL-H power units:

- utilize the traditional 3010 EN control valve providing exceptional ride quality and reliability and can also be fitted with the **new NGV electronic valve**
- can be driven by **eco-fluids** or mineral oil

Evolution of technology



Kit A2

From November 2005 the A2 amendment is an integral part of EN 81.2:1999 lift rules. Hence it is possible to plan and to install MRL lifts without obligation of a risk analysis, by simply respecting the lift rule.

The KIT A2 is a set of components specially designed for hydraulic lifts without machine room, as per EN 81.2/A2, lift rules.

The KIT A2 is made up by:

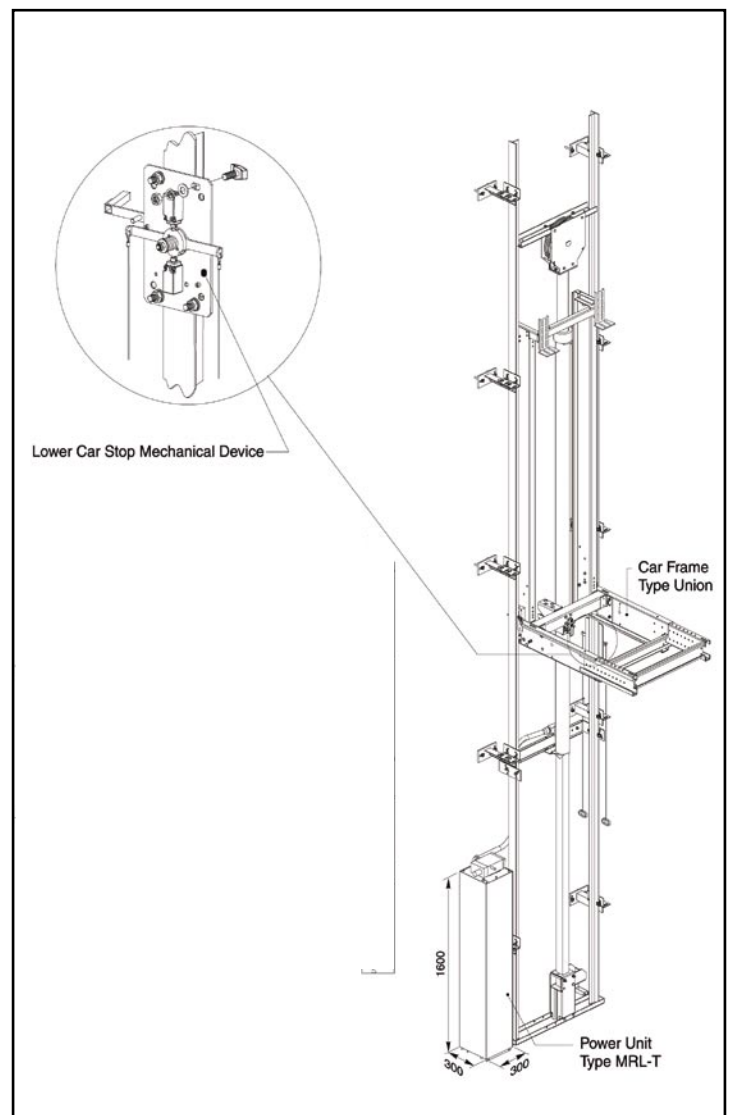
- ➔ MRL-T POWER UNIT (fitted out with traditional valve groups or with the latest electronic valves)
- ➔ JACK 1008 SL TYPE
- ➔ UNION CAR FRAME
- ➔ LOWER CAR STOP MECHANICAL DEVICE

Main advantages of the KIT A2:

- reduction of the lift shaft sizes (thanks to the power unit and the car frame design)
- compliance with EN 81.2/A2 lift rules

OPTIONAL EQUIPMENT:

- UPPER CAR STOP MECHANICAL DEVICE
- WALL BRACKETS
- ROPES
- GUIDE RAILS
- FLUID



ATTENTION: the use of MRL-T fluitronic power unit and KIT A2 doesn't automatically authorize the installation of MRL hydraulic lifts according to EN 81.2/A2 rules; all of the remaining components, specifically the electronic parts, have to be planned according to the specified rule, providing for example some additional contacts to one or to all of the landing doors, thus to restrict each car movement in case of access to the pit, or a safety electrical device connected to the mechanical devices of car block, in order to ensure what is specified in the mentioned rules.