

QUICK PRODUCT GUIDE



OFFICIAL CATALOG
GMV EUROLIFT S.A.U.

Polígono Industrial Rosanes II C/ Luxemburgo, 7-17 08769
Castellví de Rosanes (Barcelona) España.

Tel: +34 93 774 57 90
e-mail: comercial@es.gmvgrupo.com
www.gmveurolift.es

INDEX

Pag. 4 **PRODUCT SYMBOLS AND ORGANIZATION CHART**

Pag. 6 **1. ENERGY EFFICIENCY**

Pag. 8 1.1 Easy kit efficiency

Pag. 10 1.2 Ecological fluid

Pag. 11 1.3 Valve groups

Pag. 14 **2. NEW CONSTRUCTION**

Pag. 16 2.1 Control Units

Pag. 22 2.2 Pistons

Pag. 26 2.3 Car frames

Pag. 30 2.4 Cabinets

Pag. 32 **3. MODERNISATION**

Pag. 38 **4. OPTIMIZATION**

Pag. 46 **5. LEGALIZATION**

Pag. 52 **6. SECURITY**

Pag. 54 6.1 Rescue

Pag. 55 6.2 Anti-seismic

Pag. 56 **7. ECOLOGY**

Pag. 59 **8. CONTACT**

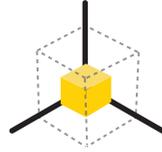
SYMBOLOLOGY



Ecological fluid



Silent



Reduced dimensions



Competitive price



Energy efficiency



Novelty



Quick installation



Big loads



Higher speed

PRODUCT ORGANIZATION CHART

VALVE GROUPS

Mechanic	3010 ¾"
	3010
	3010 A3
Electromechanical	3100 A3
	3100 EL2
Electronic	NGV A3

PISTONS

1st Stage	Conventional: 1000, 1001, 1008
	SL (Slim): HL SL, 1000 SL, 1001 SL, 1008 SL
Telescopic	9000 Series
	TCS
	EC

CONTROL UNITS

MC	HL
	HL 50
	GL
	F1
	T2
	T3
	T4
DRY	HL DRY
	HL 50 DRY
	GL DRY
	F1 DRY
	T2 DRY
MRL	MRLT
	HLV

CAR FRAME

1 piston	HL
	Union
	8000 Series
+1 piston	TW
	TX

ARMARIOS

Easy	300
	400
	500
	650

OPTIONAL COMPONENTS

Oil cooler
Self-contained oil cooler
Soft-Starter
Soft-Stop
Oil heating resistance
Micronivelation
Pawl Device
Overload pressurestat
Hand pump
Cabin position indicator

MODERNISATION

Kits	DFS forklift
	Kit DLV A3
	Kit Conversion A3





1. ENERGY EFFICIENCY

ENVIRONMENTALLY FRIENDLY
TECHNOLOGY

1.1 EASY KIT EFFICIENCE

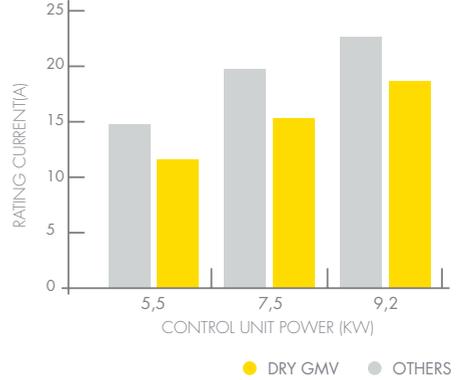
The range of **Easy kit efficiency** control units has been designed to modernize the current hydraulic elevator park by installing the latest technology in DRY motors with 3010 valve group and electronic NGV. It installs quickly and easily.

ADVANTAGES OF THE ENTIRE RANGE

- › Modernization of existing installations in a fast and easy way without costs due to the change of control panels.
- › Offer customer improvement quickly and economically.
- › GMV guarantee.
- › Reduction of contracted power and electricity cost.
- › Reduction of elevator consumption with DRY motors up to 40% depending on the installation.

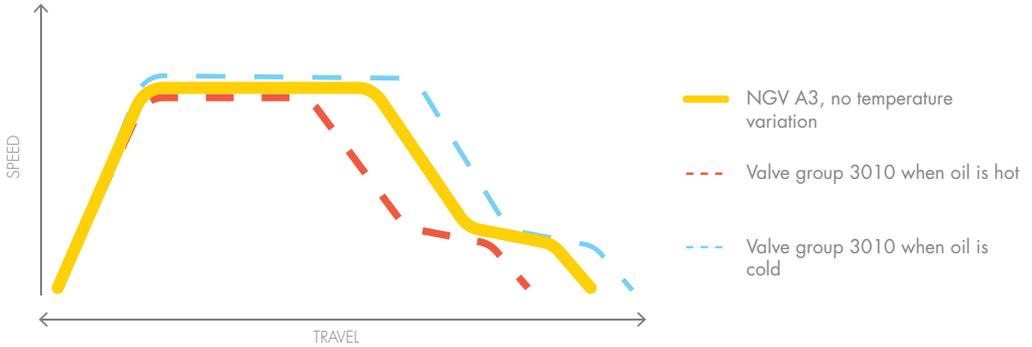
In addition the valve groups NGV and 3100:It integrates double safety system.

- › It integrates double security system.
- › Low cooling requirements.
- › Electronic control of the comfort and precision of stop both in rise and in descent.
- › Programmable maintenance speed increasing maintenance safety.



EFFICIENCY CONTROL UNITS + ECO-EFFICIENCY

Behaviour of the lift with temperature variation in the oil



- › Reduces installed power and consumption by up to 40% with DRY control units.
- › Higher performance vs other valve groups.
- › Respectful of the environment.
- › Optimized for ecological fluid use.
- › Practically unnecessary the use of oil coolers.

Options	3010	3010 A3	NGV EK	NGV A3	3100 A3	3100 EL2
Soft Starter	●	●	●	●	●	●
Soft Stop	●	●	✓	✓	✓	✓
Pressurestat	●	●	✓	✓	●	●
Oil heating resistance	●	●	●	●	●	●
Electrical emergency	✓	●	●	●	●	●
DLV A3	●	✓	✓	✓	✓	●
Cabinet	●	●	●	●	●	●
2CH	●	✓	✓	✓	✓	-
Ecological fluid	●	●	●	●	●	●
Programming console	-	-	●	●	●	●

● Optional

- Not available

✓ Includes

For any questions please contact the GMV EUROLIFT sales department.



Fluid from hydraulic elevators is not consumed, it is used. This along with the new ecological fluids are **biodegradable** by more than 95% (ECO-Label certified), where they make **the hydraulic lift the most environmentally friendly market.**



1.2 ECOLOGICAL FLUID

95% BIODEGRADABLE

Its synthetic base allows greater stability thanks to a high viscosity index compared to traditional oils. The flash point is greater than 250° (180° in traditional oils) and is a hydraulic fluid classified HEES by ISO 6743-4 regulation.



ECO-LABEL CERTIFICATE

They guarantee the best results against wear of hydraulic lifting equipment. Highly recommended for optimum performance for all valve groups.

1.3 GROUPS OF VALVES

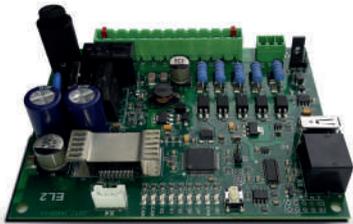
3100 2CH A3



(1) Recommended fluid to ensure optimum performance of the equipment.

Characteristics group of valves		
Model	3100-EL2-2CH-A3 - 1" ¼	
Regulation	EN 81.20 -/ EN 81.50 Double security system	
Technology	Digital Fluitronic - Stepping System	
Flow range	55 ÷ 216 [l/min]	
Maximum control unit speed	1 [m/s]	
Maximum static pressure	45 / 4.5 [bar/MPa]	
Minimum static pressure under vacuum	12 / 1,2 [bar/MPa]	
Flow	≥ 55 l/min	≤ 216 l/min
Connection Group of Valves	1" ¼	
Orientation connection V.G.	Horizontal	
	Flexible Hose 1"¼ Rigid Hose 35 L	Flexible Hose 1" ½ Rigid Hose 42 L
Working temperature	5 ÷ 70 °C	
Fluid type	Eco-friendly / mineral ISO VG 46(1)	

Electronic board features	
Model	3100
Technology	Digital Fluitronic - Stepping System
Regulation	EMC EN 12015 y EN 12016
Stand-by consumption	50 mA
Maximum consumption	600 mA
Supply Voltage Electronic Board	23-27 Vdc / 20-24 Vac
Input signals	16-230 Vdc / Vac
Coil voltage Electrical emergency drop	12 Vdc - 2,2 A
Location	Installed in protective box over control unit (2)
Exits to the control panel	1 alarm relay output
Relay output characteristics	24...180Vdc / Vac 10mA@20Vdc / 2A@180Vac
Indicators	Operating status LED indicators and input signals
Optional accessories	Programmer



(2) The electronic plate is supplied installed on the control panel and wired with the valve assembly.

1.3 GROUPS OF VALVES



Model	3010 3/4"	3010	3010 A3
Technology	Mechanics	Mechanics	Mechanics
Symbology			
Compliance with the regulations	EN 81.41 ¹	EN 81.2	EN 81.20, EN 81.50
Installations	single family homes	All	All
Energy efficiency	★★★★★	★★★★☆	★★★★☆
Ecological Fluid	Yes	Yes	Yes
Compatible control units	HL, HL 50	HL, HL 50, GL, F1, T2, T3, T4	GL, F1, T2, MRL-T
Connection valve group ⁴	3/4"	3/4" - 1" - 1 1/4" - 1 1/2" - 2"	1 1/4"
Max. speed (m/s) ²	0,15	0,8	0,8
Velocidades	2	2	Speeds
Power (kw)	1.5 - 2.6	1.5 - 58.8	2.9-18.4
Max. working pressure (bar)	45	35 / 45 ³	45
Available accessories	Oil heating resistance, pressure switch, DIV 3/4, 2CH	Oil heating resistance, pressure switch, DIV, 2CH	Oil heating resistance, pressure switch, 2CH

¹ Specific regulations for lifts for persons with reduced mobility

² Maximum speed up to 0.15 m/s for lifts according to Machinery Directive 2006/42/EC.
Maximum speed up to 1 m/s according to EN 81.20 and 81.50.

³ 35 bar in people and 45 bar in elevators and goods.

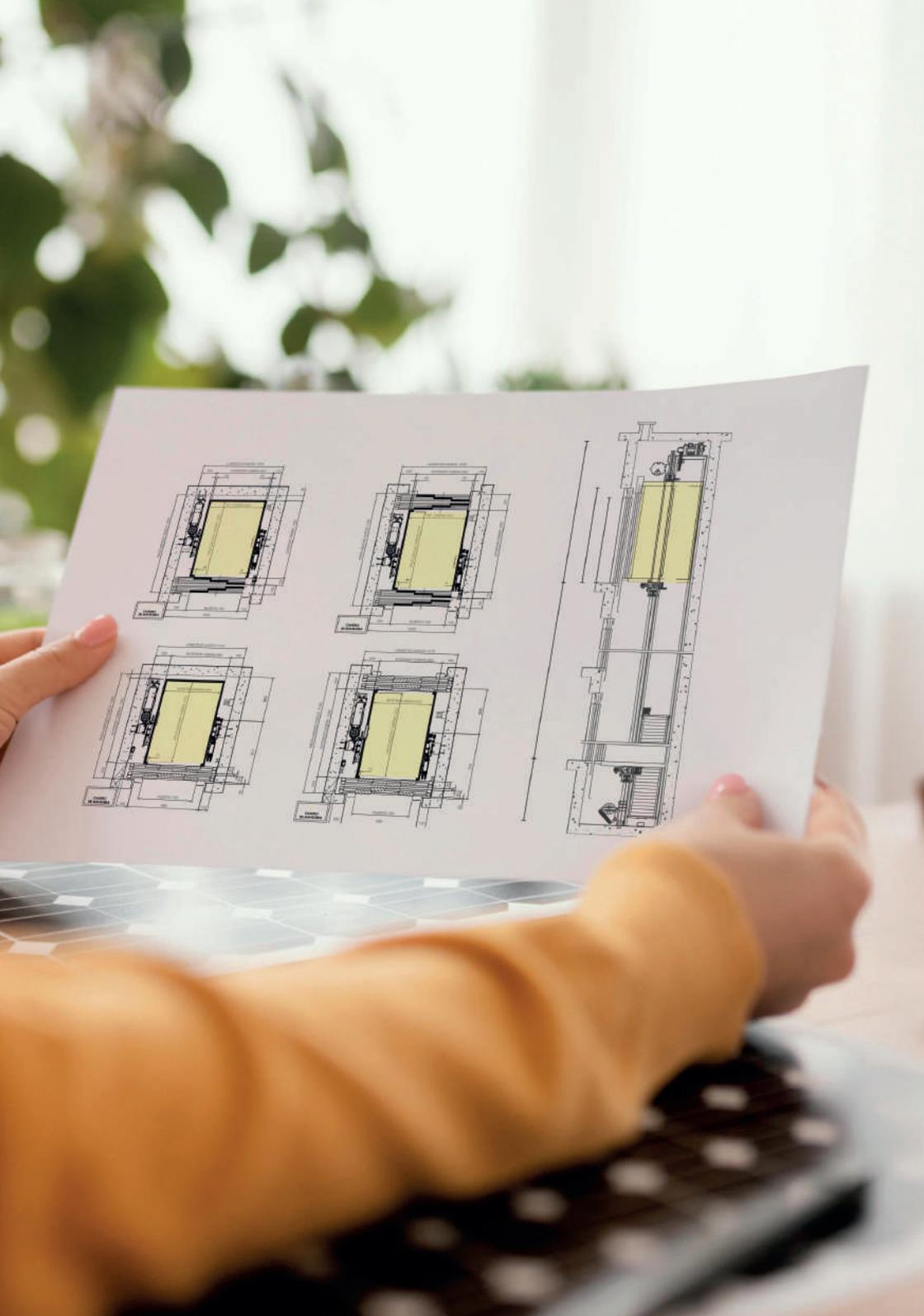
⁴ Optional 1" fitting for flow rates less than 55L.



3100 A3	3100 EL2	NGV A3	NGV EK
Electromechanical	Electromechanical	Electronics	Electronics
EN 81.20, EN 81.50	EN 81.2	EN 81.20, EN 81.50	EN 81.20, EN 81.50
Public and residential buildings, modernizations	Public and residential buildings, modernizations	Public and residential buildings, modernizations	Public and residential buildings, modernizations
Yes	Yes	Yes	Yes
GL, F1, T2	GL, F1, T2	GL, MRL-T, F1, T2, T3, T4	GL, MRL-T, F1, T2
1 1/4	1 1/4	1 1/4 - 1 1/2	1 1/4
1	1	1	1
Adjustable	Adjustable	Adjustable	Adjustable
2.9-18.4	2.9-18.4	2.2 - 51.5	2.2 - 29.4
45	45	45	45
Oil heating resistance, pressure switch, electrical emergency, programming console	Oil heating resistance, pressure switch, electrical emergency, programming console	Oil heating resistance, electrical emergency, programming console	Oil heating resistance, electrical emergency, programming console

SPEED

The ideal speed for this type of buildings that are not very tall is 0.63 m/s. The hydraulic elevator reaches up to 1m/s. For buildings with up to 5-6 floors, the profitability of hydraulic elevators is practically unbeatable (services and spare parts).





2. NEW CONSTRUCTION

2.1 CONTROL UNITS

NGV A3 ELECTRONIC CONTROL UNIT

The Smart Revolution begins

Innovation

- › Self-monitoring, precision and built-in safety redundancy. The STEPPING SYSTEM A3.
- › Stop accuracy $\pm 5\text{mm}$.
- › Solution available for all GMV version A3 plants.
- › Double security system.

Eco-efficiency

- › Reduce installed power and consumption by up to 40% with DRY plants.
- › Greater performance vs other valve groups.
- › Environmental-friendly.
- › Optimized for the use of ecological fluid.
- › Oil coolers practically unnecessary.

Configuration

- › Programming console.
- › Digital pressure and temperature control.
- › Integrated programmable microSD memory card.

In Compliance

- › EN 81.20 y 81.50 ((Certified by TÜV Italy).
- › DA 2015/33/UE
- › EMC EN 12015 y EN 12016



For optimal operation of the NGV A3, GMV strictly recommends the use of HV46 fluid with the following specifications:

- HV46 Fluid Specifications
- Temperature: $5^{\circ}\text{C} - 70^{\circ}\text{C}$
- Viscosity: $> 140 \text{ cSt}$
- Fluid type: ISO VG 46



ELECTROMECHANICAL POWER UNIT 3100 A3

Maximum comfort complying with EN 81.20/50

Characteristics

- › Possibility of modernizing existing elevators with mechanical valve.
- › Reduction of installed power and consumption by up to 40% with DRY plants.
- › Not influenced by the variation in pressure and temperature of the fluid, so it does not require heating resistances.
- › Easy management of spare parts. Many of the components are interchangeable with the 3010 valve.

Eco-efficiency

- › Reduce installed power and consumption by up to 40% with DRY plants.
- › Environmentally friendly.
- › Optimized for the use of ecological fluid. The use of refrigerators is practically unnecessary.

Setting

- › Programming console.
- › Digital temperature control.
- › Integrated soft-stop function.
- › Use of the PT01 programmer already used for the NGV electronic valve group.

In Regulations

- › Regulation EN 81.20 and 81.50 (Certified by TÜV Italy).
- › DA 2015/33/UE
- › EMC EN 12015 y EN 12016

**Reduce installed power
and consumption by
up to 40% with DRY
control units**





ELECTROMECHANICAL POWER UNIT 3100 EL2

Compensated hydraulic valve with electronic regulation with internal hydraulic feedback (closed circuit).

Characteristics

- › Possibility of modernizing existing elevators with mechanical valve.
- › Possibility of modernisation of existing lifts with mechanical valve.
- › Electronically adjustable speed.
- › Not influenced by the variation in pressure and temperature of the fluid, so it does not require heating resistances.
- › Easy management of spare parts, most of the components are interchangeable with the 3010 valve.

Eco-efficiency

- › It is not influenced by the pressure and temperature variation of the fluid, so it does not need to be equipped with a valve heating resistance.
- › Respectful with the environment.
- › Optimized for the use of ecological fluid.
- › Oil coolers practically unnecessary.

Configuration

- › Programming console.
- › Integrated soft-stop function.
- › Use of the PT01 programmer already used for the NGV electronic valve group.

In Regulations

Ideal for demanding customers who require maximum comfort in markets where it is not necessary to comply with EN 81.20/50.

Excellent comfort for elevators that do not need to comply with A3





MECHANICAL POWER UNITS 3010 A3

Hydraulic valve with mechanical adjustment. It offers the advantages of the 3010 valve together with an integrated double safety seal, complying with EN 81.20/50. Does not require DLV.

Characteristics

- › Capacity 55-216 l/m.
- › Minimum static pressure 12 bar.
- › Maximum static pressure 45 bar.
- › Operating temperature 5-70°C.
- › Ground leveling accuracy ± 5 mm.

Eco-efficiency

- › Respectful with the environment.
- › Optimized for the use of ecological fluid.
- › Reduce installed power and consumption by up to 40% with DRY control units.

Configuration

- › The 3010 A3 valve has been specifically designed to ensure the high operating comfort of hydraulic elevators.
- › Possibility of modernizing existing elevators with 3010 valve.*
- › Simple spare parts management. Most of the material is interchangeable with the 3010 valve.
- › Each valve is regulated before shipping so it is ready for installation.

In compliance

Compensated hydraulic valve with mechanical adjustment with double internal safety lock in accordance with EN 81.20/50.

**Reduce installed power
and consumption by
up to 40% with DRY
control units**



* The table must be updated for A3 adaptation.



Model	HL DRY	HL 50 DRY	GL	F1
Symbology				
Installations	Single-family homes	Single-family homes	Single-family homes, public and residential buildings	Public and residential buildings
Ecological Fluid	Yes	Yes	Yes	Yes
Compatible cabinet	EASY 300-EASY 400	EASY 300-EASY 400	EASY 500	EASY 500
Compatible valve group	3010 3/4", 3010, NGV	3010, NGV	3010/A3, NGV A3/EK, 3100 EL2/ 2CH A3	3010/A3, NGV A3/EK, 3100 EL2/2CH A3
DRY1 Motor ¹	Yes	Yes	Yes	Yes
Immersed motor flow (l/m)	-	-	3010: 25 - 180 NGV A3/EK: 55 - 210 3100: 55 - 210	3010: 25 - 210 NGV A3/EK: 55 - 210 3100: 55 - 210
DRY motor flow (l/m)	8-23	8-43	NGV A3 y NGV EK: 55 - 150	NGV A3 y NGV EK: 55 - 150
Connection to valve group (inches)	3/4"	3/4"	1" 1/4	1" 1/4
Load capacity (people)	4	4	3 - 6	6 - 8
Max travel (stops)	5	5	6	7
Traffic (starts/hour) ⁵	25	25	25 - 35	30 - 45
Useful fluid volume (l)	Max. 33	Max. 50	Max. 75	Max. 90

¹ For versions with DRY motor, the NGV EK valve group will be available up to 9.2 kw.

² Only available in control units up to 300 l/min.



T2 ⁴	T3 ⁴	T4 ⁴	MRL-T
Public and residential buildings	Special installations	Special installations	Single-family homes, public and residential buildings
Yes	Yes	Yes	Yes
E650	-	-	No (central located in pit)
3010/A3, NGV A3/EK, 3100 EL2/ 2CH A3	3010, NGV A3, NGV EK ²	3010, NGV A3	3010 ¾", NGV A3
Yes	-	-	-
3010: 25 - 210 NGV A3/NGV EK: 55 - 210 3100: 55 - 210	180 - 430	430 - 600	55 - 180
NGV A3 y NGV EK: 55 - 210	-	-	-
1" ¼	1" ½	2"	1" ¼
13	From 450 Kg	From 1000 Kg	4/8
8	10	10	4/7
40 - 50	More than 50 ³	More than 50	30 - 45
Max. 150	Max. 300	Max. 400	Max. 75

³ Depending on the load.

⁴ Optional: double control units.

⁵ Estimated data. It will depend on the characteristics of the installation.

2.2 PISTONS

PISTONS 1 STAGE



Model	HL SL ¹	1000	1000 SL
Symbology			
Traction	Differential 2:1	Direct central 1:1	
Max cabin stroke (stops)	5 stops	6 stops	
Availability in pieces	1,2	1, 2, 3	
Diameter (mm)	70 - 80	120 - 238	60 - 110
Thickness (mm)	5 - 7,5 - 12	5 - 6 - 7,5 - 10 - 12 - 14	5 - 7,5 - 12

¹ Specially designed for HL DRY / HL 50 DRY power plants.



HL SL PISTON

For single-family homes of both new construction and existing buildings.

Main advantages:

- › Easy maintenance comparable to the historic 1008 SL piston.
- › Possibility of assembly in installations with reduced maneuverability.
- › Compatible with mechanical lifting platforms.
- › Valve paracaídas CE certified according to EN 81.20/50.
- › Space optimization thanks to the location of the parachute valve.
- › GMV guarantee





Model	1001	1001 SL	1008	1008 SL
Symbology				
Traction	Direct lateral 1:1		Diferencial 2:1	
Max cabin travel	3 stops		8 stops	
Availability in pieces	1,2,3		1, 2, 3	
Diameter (mm)	120 -160	60 - 110	120 - 238	60 - 110
Thickness (mm)	5 - 6 - 7,5 - 10 - 12	5 - 7,5 - 12	5 - 6 - 7,5 - 10 - 12 - 14	5 - 7,5 - 12

€↓ FLEXIBLE HOSE

- › Flexible hose with synthetic rubber inside covered with double metallic mesh spiral of maximum strength with an outer layer of synthetic rubber.
- › Uses: mineral or synthetic based hydraulic fluids.
- › Working temperature: -40°C to +100°C.
- › Couplings: 9S Mn Pb28 material.
- › Supplied from 1 to 20 meters in increments of 0.5 m (other dimensions, upon request).
- › Flexible 3/4" hose option with 90° connector.
- › According to EN 81.20 standard: Art. 5.9.3.3.3.1.



TELESCOPIC PISTONS



Range	9000 Series (Hydraulic Sync.)		
Model	9100	9101	9110
Simbology			
Synchronization	Hydraulic	Hydraulic	Hydraulic
Traction	Direct lateral 1:1	Direct lateral 1:1	Direct lateral 1:1
Max. travel of cabin	4 stops	6 stops	6 stops
Stages available	2	3	2
Diameter 1st section (mm)	42 - 100	42 - 100	50 - 100
Main advantage	Aesthetic design. Ideal for panoramic installations.		

¹ All telescopic mechanical timing pistons include guidance.

² Installations of 1, 2 (9000 series) or 2, 4, 6 or 8 pistons can be made (TCS - EC series).

MINERAL FLUID

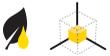
Base derived from petroleum and lower price compared to other oils. The flash point is greater than 200° (180° in traditional oils) and is a hydraulic fluid classified HEES by ISO 6743-4 regulation. GMV Mineral Fluid HV46 has:

- > Good filterability.
- > Excellent anti-corrosion.
- > Antioxidant and foaming agent.
- > Very low freezing point.
- > Compliant with International Standards.





Range	9000 Series	TCS-EC series (mechanical sincr.)	
Model	9111	TCS	EC
Simbology		  	  
Synchronization	Hydraulic	Mechanical	Mechanical
Traction	Direct central 1:1	Direct lateral 1:1	Direct lateral 1:1
Max. travel of cabin	8 stops	8 stops	8 stops
Stages available	3	1 - 2 - 3	1 - 2 - 3 - 4
Diameter 1st section (mm)	50 - 100	60 - 120	60 - 120
Main advantage	Aesthetic design. Ideal for panoramic installations.	High loads. Ideal for forklifts, forklifts, etc.	



RIGID HOSE

- > The complete connection conduction is supplied based on the arrangement of the pistons..
- > Hoses according to EN 81.20 and 81.50 with welded and/or threaded connection (racord series S).
- > Rigid hose with racord and lock ring L series.
- > Made in sections of 5 m.

Technical features:

Rigid hoses between the control panel and the parachute valve:

- > Tube diameter: 35 x 2.5 (Series 35), 42 x 3 (Series 42 L).

Connecting lines between the parachute valve and the piston:

- > Tube diameter: 30 x 3 (Series 30 S), 38 x 4 (Series 38 S) and 60 x 5 (Series 60 S).



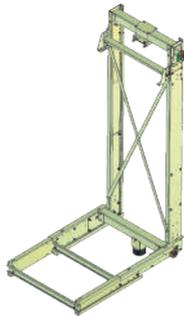
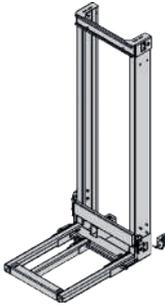
2.3 CAR FRAMES

1 PISTON TRACTION 2:1



Range	HL		HF
Models TRACCIÓN 2:1	HL 700	HF HL	HF48
Rated load (kg)	250	450	515
Car weight (Kg)	185	530	135
Car frame weight (Kg)	90	120	1130
Distance between guides	500 - 700	700	600 - 800
Total load (Kg)	700	1140	1030
Speed max. (m/s)	0,15	0,15	0.63 - 1 ¹
Guide Types	T 82/68/9	T 82/68/9	T 82/68/9 T 90/75/16
N° cables / ø (mm)	3 cables, ø 8	3 cables, ø 8	3 cables, ø 9
Guide shoe types	Sliders	Sliders	Sliders
max. piston ø (mm)	115	157	195
Buffer type	Buffer	Buffer	Buffer
Min. pit (mm)	80	80	500
Min. pit (mm) according to EN 81.20/50	-	-	1100

¹ With progressive parachute; From 0.63 m/s, use only calibrated or brushed guides.



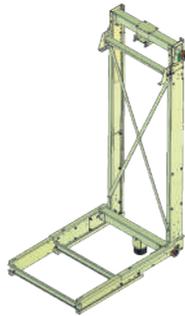
HF	UNION	800 Serie
HF63	1006	1511, 2011
630	1000	1500 - 2000
735	690	900 - 1300
135	260	400 - 650
800	900 - 1300	-
1500	1955	2500 - 3950
0.63 - 1 ¹	0.63 - 1 ¹	0.63 - 1
T 82/68/9 T 90/75/16	T 89/62/16, T 90/75/16, T125/68/9, T125/82/16, T 127/89/16	T 125/82/16 T 127/89/16
4 cables, ø 9	4 cables, ø 11	4 o 6 cables, ø 13
Slidings	Slidings	Slidings
195	217	242 / 282
Buffer	Buffer	Buffer
500	500	770 (2011)
1100	1100	1230 (2011)

¹ Optional wheel. Polizene slider for models 1511 and 2011.

1 PISTON TRACTION 1:1

The hydraulic elevator:

- › It does not transmit noise or vibrations to the building.
- › Does not overload the structure.
- › The lifting load is transmitted directly to the building foundation.



Range	UNION	8000 Series
Models TRACTION 1:1	4805, 6305, 1006	1511, 2011, 6200, 6600
Rated load (kg)	480 - 1000	1210 - 2000
Car weight (Kg)	545 - 740	940 - 1400
Car frame weight (Kg)	145 - 260	350 - 650
Total load (Kg)	1170 - 2000	2500 - 3950
Max speed (m/s)	0,63	0,63
Type of guide	T 82/68/9, T 89/62/16, T 90/75/16, T125/68/9, T125/82/16, T 127/89/16	T 125/82/16 T 127/82/16-14
Guide shoe types ¹	Sliding	Sliding
ø max. piston (mm)	195 / 217	150 / 242 / 272
Buffer type	Buffer	Buffer
AM (mm)	2565 (min.) - 3895 (max.) 2600 (min.) - 3900 (max.)	Consult according to installation characteristics
Pit min. (mm) ²	462 / 500	770
Pit min. (mm) according to EN 81.20/50	1100	1230

¹ Bearing rollers are optional

² Cabin base 80 mm.

MORE THAN ONE 2:1 AND 1:1 TRACTION PISTON



Range	TW	TX
Models	TW 45, TW 75, TW 100	TX 45, TX 75, TX 100
Traction	2:1	1:1
Rated load + Cabin weight (Kg)	4200 - 11600	4200 - 11600
Rated load ¹ (Kg)	525 - 4590	525 - 4590
Car frame weight (Kg)	578 - 1650	565 - 1760
Max speed ² (m/s)	0,50 - 0,63	0,25 - 0,63
Car surface area (m ²)	TW 45: 2 - 7 TW 75: 3 - 10 TW 100: 5 - 17	TX 45: 2 - 7 TX 75: 3 - 10 TX 100: 5 - 17
Type of guide	125/82/16, 127/89/16	125/82/16, 127/89/16, 140/108/19
Guide shoe types ³	Sliding	Sliding
∅ max. piston (mm)	130/195	233/235
Max. distance fixing guides (mm)	800, 900, 2000	1200
Buffer type	Buffer	Buffer
AM (mm)	TW 45: 1260 - 2360 TW 75: 1460 - 2560 TW100: 1200	TX 45: 2.300 - 4.400 TX 75: 2.200 - 4.300 TX 100: 2.050 - 4.150

¹ Load calculated according to EN 81.20, EN 81-50 Table 1.1.A.

² According to model.

³ Bearing rollers are optional

2.4 CABINETS

GAMA EASY



Model	EASY 300	EASY 400
Symbology	€↓  	€↓  
Compatible power units	HL DRY 3010 3/4" * HL DRY NGV 3/4" * HL 50 DRY	HL, HL NGV DRY, HL 3010 DRY
Flexibility level	★★★★	★★★★
Exterior dimensions (W x D x H) mm	540 x 300 x 1300	700 x 400 x 1300
Useful dimensions (W x D x H) mm	538 x 298 x 859	615 x 315 x 1250
Packaging dimensions	570 x 310 x 1310	1360 x 420 x 250
Assembly time	< 15 minutes	15 minutes
Main advantages	Compact	Valid for all types of single-family power plants on the market. Easy to assembly of the control panel. Easy to transportation, ideal for exports.

*Note: Metal tanks - GMV Eurolift design



Model	EASY 500	EASY 650
Symbology	€↓   	€↓   
Compatible power units	GL, GL DRY, F1	T2
Flexibility level	★★★★	★★★☆☆
Exterior dimensions (W x D x H) mm	1000 x 510 x 2160	1000 x 650 x 2200
Useful dimensions (W x D x H) mm	Upper part (electric): 880 x 480 x 860 Bottom (hydraulic): 880 x 480 x 1300	Upper part (electric): 857 x 603 x 918 Bottom (hydraulic): 918 x 603 x 1325
Packaging dimensions	2120 x 535 x 310	2170 x 670 x 270
Assembly time	15 minutes	20 minutes
Main advantages	<p>Intermediate panel that separates the hydraulic part from the electrical part.</p> <p>Easy to assembly of the control panel.</p> <p>Easy to transportation</p>	

307-315 6
298-306 5
289-297 4
280-288 3
271-279 2
270 1

0



A modern interior staircase with grey stone steps and a dark blue metal railing. The wall to the left is covered in vertical wood slats with a warm glow from a recessed light strip. A large yellow arrow-shaped graphic points left, partially overlapping the text. The text '3. MODERNIZATION' is centered in bold black font on a yellow background.

3. MODERNIZATION

DRIVE FLUITRONIC SYSTEM FORKLIFT (DFSM)

Kit for hydraulic installations that transport large loads.

Drive Fluitronic System Forklift (car frame + power unit + piston + driving kit + ecological fluid) is specially designed for hydraulic installations 1:1 that transport large loads, according to current regulations. EN 81.20 and EN 81.50. The DFSM kit consists of:

- › Hydraulic chassis, rails and rail fixings.
- › Control unit with NGV A3 or mechanical valve group.
- › Piston GMV EC o 1008.
- › Driving kit.
- › Ecological fluid.

Main advantages of DFSM

- › Minimum dimensions of the shaft in relation to the dimensions of the cabin thanks to the design of the chassis and pistons.
- › Supplied with all components to comply with EN 81.20 and EN 81.50.
- › Threaded piston connections with an adjustable part allow for quick and easy installation.
- › Hydraulic power plant with electronic valve group as standard and 3010 valve with soft stop as optional.
- › Greater comfort and precision when stopping.
- › Direct acting EC pistons ensure high stability during loading and unloading.
- › Rigid piping system with quick adjustment and easy installation.
- › Its design guarantees the robustness and lightness of the mechanics themselves.
- › Car speed up to 1 m/s depending on the installation.
- › No welding in the assembly process.
- › Reduction in logistics costs.
- › Available with double control units.



Examples of **emblematic installations** where our components have been used for lifting large loads:

LOUVRE ABU DHABI



NESTLÉ (MAIPÚ, CHILE)



DLV A3 VALVE

The DLV A3 valve is a pilot-operated non-return valve that must be mounted in line between the piston and a 3010 valve group or in any hydraulic valve group on the market, both mechanical and electronic valve groups.

The valve should be installed closest to the main valve group. In particular cases it can be mounted near the piston without compromising its operation. Requires type certification.

During the rise phase it behaves like a non-return valve, with the same oil pressure sent by the pump controlling the degree of its opening. The pressure loss in this phase is generally around $1.0 \div 1.5$ bar depending on the specific conditions of use.

On descent, on the contrary, when the valve is activated, it allows the oil to pass from the piston to the main block and later to the tank. When it is deactivated it closes immediately and blocks the elevator.



ASSEMBLY NOTES

To properly install the DLV on 3010 or similar valves, the following devices (if any) must be mounted or moved to the DLV.

- }) Overload pressurestat (installation on the DLV A3 mandatory).
- }) Pressure transducer (installation on the DLV A3 mandatory).
- }) Pressure gauge and connection for EN inspection pressure gauge (installation in the DLV A3 recommended).

Model	DLV A3 1" ¼				DLV A3 1" ½					DLV A3 2"			
Max flow intervention	216 l/min				432 l/min					600 l/min			
Nominal flow rate of the control unit	55 - 216 l/min				250 - 432 L/min					500 - 600 l/min			
Work pressure	15 - 45 bar												
Limit temperature	5 - 70°C												
Type of oil	ISO VG 46 - I ≈120												
Solenoid valve: Power	VDC	12	24	48	80	90	110	180	207	VAC	110	220	230
Solenoid valve: Power	VDC	45	30					VAC			30		
Energy feeding	12 VDC o 24 VDC												

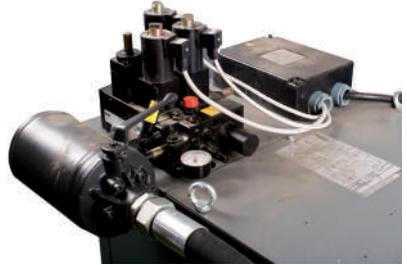


NGV A3 CONVERSION KIT

The NGV A3 Conversion Kit allows the **NGV A3 electronic group to be installed in any existing installation** on the market equipped with a mechanical group. Thanks to the double redundant safety system that the A3 Conversion Kit incorporates as standard, any existing hydraulic equipment is ensured to comply with the new regulations **EN 81.20 and EN 81.50** (in force since September 1, 2017 and mandatory for new facilities).

Main advantages:

- › Assembly of the kit without the need to modify the control unit.
- › Kit adapted to all types of plants regardless of their flow rate (up to 600 l).
- › It incorporates as standard a double redundant security system in compliance with the new regulations EN 81.20 and EN 81.50 (in force for new installations).
- › Greater stopping precision.
- › In compliance with the Lifts Directive 2014/33/EU.
- › Built-in installation calculation programming.
- › Regulation of the valve group using a programming console.
- › Installation in 2 hours.
- › Speed up to 1 m/s without any optional.
- › Adjustable maintenance speed.
- › Ride comfort comparable to an electric VVVF system.
- › The use of HV46 Mineral Fluid is recommended, it optimizes its operation.



Central with mechanical valve group



Control unit with NGV A3 Conversion Kit

The ETC system is an electronic floor arrival management system for new and modernized elevators. Installable in plants with 3010 valves.

Reduces the energy consumption of the installation up to 20%

By optimizing the ground approach speed curve (slow speed) which leads to a reduction in travel time (fly time) and, as a consequence, the engine operating time.

In particular, the ETC system works on leveling spaces, reducing them and keeping them constant in different temperature conditions.

Main advantages:

- › **Reduction in total operating time** thanks to the leveling phase, where the motor is running, but the elevator moves at slow speed, dissipating heat. The elevator travels at fast speed for a longer time.
- › Thanks to a temperature probe, it measures the oil temperature and automatically memorizes the travel and leveling times. It self-regulates quickly thanks to the memorized parameters with the aim of reducing slow speed times, both up and down.
- › **Reduction of the installation's energy consumption up to 20%.** It allows you to eliminate the use of valve and oil heating resistors with the corresponding energy savings.
- › **It ensures a traffic capacity** equivalent to a traditional hydraulic elevator with an average speed of 0.8 m/s.
- › It can also be installed in existing elevators **without any modification to the installation.**

**Quick installation.
Installation of the ETC
system in existing
elevators is done in 2
hours.**







4. OPTIMIZATION

OPTIONAL COMPONENTS

€↓ OIL COOLER

Increase in the number of starts/hour.

Main characteristics

- › Guaranteed operation in very high traffic conditions.
- › The cooler prevents excessive heating of the oil and extends the life of the engine.
- › Available with single-phase and three-phase motors at different voltages.
- › Available models (50Hz or 60Hz): NEG 3, NEG 6, NEG 14.
- › For high traffic installations.
- › Recommended for high traffic installations: public buildings, offices and hospitals.



Technical specifications		NEG 3		NEG 6		NEG 14	
		50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
Refrigeration capacity ($\Delta T = 35^{\circ}\text{C}$ air temp. 20°C)	kW	3,5	3,7	7	7,7	16,3	17,4
	kCal/h	3000	3200	6000	6600	14000	15000
Pump flow	l/min	25,9	30,6	29,5	35,6	54	64,8
Fan Flow	m ³ /h	600	600	1600	1800	2800	3100
Motor power	kW	0,3	0,3	0,5	0,5	0,7	0,7
Motor speed	RPM	3000	3600	1500	1800	1500	1800
Average sound level	dB (A)	73	76	68	69	72	74
Working temperature range (oil)	°C	20 ÷ 70		20 ÷ 70		20 ÷ 70	
Max pressure work	bar / Mpa	4 / 0,4		4 / 0,4		4 / 0,4	
Safety valve pressure	bar / Mpa	6 / 0,6		6 / 0,6		6 / 0,6	
Maximum depression (pump suction)	bar / Mpa	-0,4		-0,4		-0,4	

€↓ AUTONOMOUS OIL COOLER

The AC oil cooler unit is specially designed to offer a refrigeration solution for those medium/high traffic hydraulic elevators that require a refrigeration system that can work with adverse temperature environmental conditions.

Compression refrigeration unit, with the following characteristics:

- › Low consumption.
- › Stable efficiency regardless of room temperature.
- › Pump with high suction capacity.
- › Small dimensions to place inside the machine room.
- › The best for critical weather situations (high temperature in the engine room).
- › Best for heavy duty conditions (where traffic is continuous like shopping centers, hospitals, exhibition center, etc.)
- › Ready to connect to the hydraulic system (oil inlet - oil outlet).

Technical characteristics:

- › Cooling capacity: 4,6 kW
- › Pump flow: de 30 l/m
- › Motor power: 1,5 kW
- › Refrigerant type: gas R410A
- › Average sound level: 54 dB (A)
- › Working temperature, oil: 15 ÷ 40 °C ¹
- › Oil temperature limits: 20 ÷ 35 °C
- › Connection (inches): ¾" BSP inlet
- › ½" BSP outlet

¹ Tropical version where the ambient temperature is equal to or less than 45°C

The useful life of a hydraulic elevator until now was estimated at about 20 years. Currently, with adequate maintenance and the use of this type of components that optimize the operation of hydraulic equipment, its durability can be increased up to 30 years.







SOFT-STARTER

The Soft Starter model or RSLT Soft Starter is a device used to reduce the starting current through the use of semiconductors with integrated by-pass, coupled by 3-phase asynchronous motors. It is a starter 100% compatible with GMV power plants with DRY motors.

Static starters provide improvements over hydraulic equipment:

- › Reduction of starting peaks on the power line.
- › Reduction of the mechanical and electronic stress suffered by the motor group with direct or star-delta starts.
- › Reduced start-up noise.
- › Extends the useful life of the motor.
- › Protection of the motor-pump group.
- › The lower mechanical stress increases the useful life of the installation.

It can be easily installed with any type of elevator, new or existing, connected to the motor line and with its installation inside the control panel itself, by fixing the DIN. It does not require regulation for start-up, through the self-regulation system of the starter it is configured to search for the optimal engine start.

TECHNICAL CHARACTERISTICS	
Model	RSLT
Motors	GMV DRY control units
Supply voltage	230 / 400 Vac
Feeding frequency	50 - 60 Hz
Working temperature	0 ÷ 40°C
Working altitude	1000
Protection	IP20
Weight	400 - 460 g
Starting voltage	Self-regulation
Startup time	< 600 ms
Alarm	Visual via LED
Power	Same power as motor
Certificates	95/16/CE ; 2004/108/CE
Dimensions (mm)	45 x 81 x 105



€↓ SOFT-STOP. MAXIMUM COMFORT

The soft-stop system is an optional component for the 3010 and 3010 A3 valve assemblies, which allows the user to improve the stop for a higher level of comfort (smoother stop).

Consisting of a modified VB shutter that is located within the valve group; and a modified VMP solenoid valve with a double hydraulic circuit that allows to regulate the stop for the user to obtain a higher level of comfort.

It requires adaptation of the maneuver for its correct functioning. Recommended for hotels, high-standing buildings and hospitals (lifters). Maximum comfort.



€↓ OIL HEATING RESISTANCE

It is a resistance that has installed a temperature probe. It self-regulates by keeping the oil between 20-30°C with a tolerance range of 2°/3°. 230 V or 400 V.

What achieves the oil heating resistance is to keep the oil in its optimum working range in cold weather conditions and thus optimize its performance.



PAWL DEVICE

Pawl device is a safety device that prevents lowering of the cab in loading/unloading operations. As an anti drift mechanical system it is installed in the chassis and in the guides, therefore, it is compatible with any valve group on the market.

It also performs the function of hydraulic damper when located in the pit. There are two models available depending on the type of installation:

- › NS 40/50 for max. loads 4.000Kg.
- › NS 70/100 for max. loads 7.000Kg.

Recommended for special installations with large loads (forklifts, car lifts, etc.).



€↓💡 MICRO-REVELING

- › Precision in cabin leveling.
- › Less wear on the main equipment, by not having to perform short engine starts.
- › Greater security in loading/unloading operations.
- › Lower installation consumption when using a 2.9 kW motor.
- › Installation on new equipment or installation on existing equipment.
- › Recommended for forklifts, car lifts, stretcher lifts and residential installations with more than 8 people.

Technical characteristics:

- › Three-phase 4-pole motor - power 2.9 kW/4 HP - Voltage 230/400 VAC 50/60 Hz - Consumption: 10.9/6.4 A.
- › Pump flow: 30 l/min (50 Hz), 36 l/min (60 Hz).
- › Flexible tube: SAE 100 R1.
- › Device weight: 45kg.
- › Device compatible with GMV valve groups models 3010 and NGV.

**Maximum precision in
cabin leveling.**







5. LEGALIZATION

SPANISH REGULATIONS

They comply with European Regulation EN 81.20, EN 81.50 and Royal Decree 57/2005, of January 21, which establishes requirements for increasing the safety of the existing elevator fleet.

€↓ ⚙️ OVERLOAD PRESSURESTAT NO / NC

- › According to the Royal Decree, section 15: The cabin will be equipped with an overload control device.
- › Competitive price.
- › Easy installation: 4 assembly steps in 2 hours.
- › Applicable to all types of existing plants.
- › Rubber stopper included.



€↓ ⚙️ OVERLOAD AND FULL LOAD PRESSURESTAT NO / NC

- › According to the Royal Decree, section 15: The cabin will be equipped with an overload control device.
- › Competitive price.
- › Easy installation: 5 assembly steps in 2 hours.
- › Applicable to all types of existing plants.
- › Rubber cover included.



€↓ ⚙️ **HAND PUMP**

- › According to the Royal Decree, section 14: You must have a manual pump to move the cabin upwards.
- › Competitive price.
- › Easy installation: 3 hours of assembly.
- › Applicable to all types of existing plants.
- › For hydraulic equipment without PAM before 1990.
- › Equipped with an overpressure limiter.



€↓ ⚙️ **CABIN POSITION INDICATOR**

According to the Royal Decree, section 8: Make it possible to easily control, from the engine room, whether the cabin is in an unlocking zone.

- › Competitive price.
- › Easy installation: 2 hours of assembly.
- › Applicable to all types of existing plants.



EMBOSSED TANK FOR FLUID COLLECTION

Control unit hydraulic accessories

- › Accessory compatible with GMV control units
- › Fully waterproof.
- › Capacity from 45 liters to 656 liters.
- › Adapted to be placed in cabinets.

Regulation 81-20:2014 5.2.1.9

The embossed tank is a mandatory accessory to comply with section 5.2.1.9 of Regulation 81-20 : 2014.



Control unit model	Dimensions (mm)					Capacity (l)	Compatibility Cabinet
	A	A'	P	P'	H		
HL	310	330	560	580	230	39	E-400
HL50	310	340	560	590	420	72	E-400
GL	380	450	780	850	400	150	E-500
F1 / TYPE 2	510	545	870	905	450	219	E-650
TYPE 3	635	735	1020	1120	550	385	ND
TYPE 4	700	815	1265	1380	650	618	ND

E-2CHA3-ET DEVICE

The E-2CHA3-ETC device is a certified safety module with multiple functions:

Principales ventajas:

- › **CE certified** device for monitoring components against uncontrolled movement of the cab.
- › In accordance with **EN 81-20/50**.
- › **Maintains constant travel times** for fluid temperature variations.
- › Control of signals for valves in 2CH mode (**double safety system**).
- › **Quick installation**.
- › **Without the need for modifications to the frame**.
- › **Ideal for installing in 3100 panels without modifying the panel**.



Valve group	Valve group typology	Installation		Optional	Result
		Electrical panel prepared for 2CH	Electrical panel not prepared for 2CH	E-2CH A3-ETC	Complies with CE and EN 81.20
3010	Mechanical	-	-	-	-
3010 A3	Mechanical	●	-	-	●
NGV A3	Electronic	-	●	●	●
NGV EK	Electronic	●	-	-	●
3100 A3	Electromechanical	●	●	●	●
3100 EL2	Electromechanical	.	-	-	-

● prepared

- not prepared



A close-up photograph of a person's hand pressing a button on a modern hydraulic lift control panel. The panel is dark grey or black with a digital display at the top and several buttons below. A large yellow arrow graphic points from the right towards the text on the left side of the image.

6. SECURITY

HYDRAULIC LIFT N°1 IN SAFETY

6.1 RESCUE

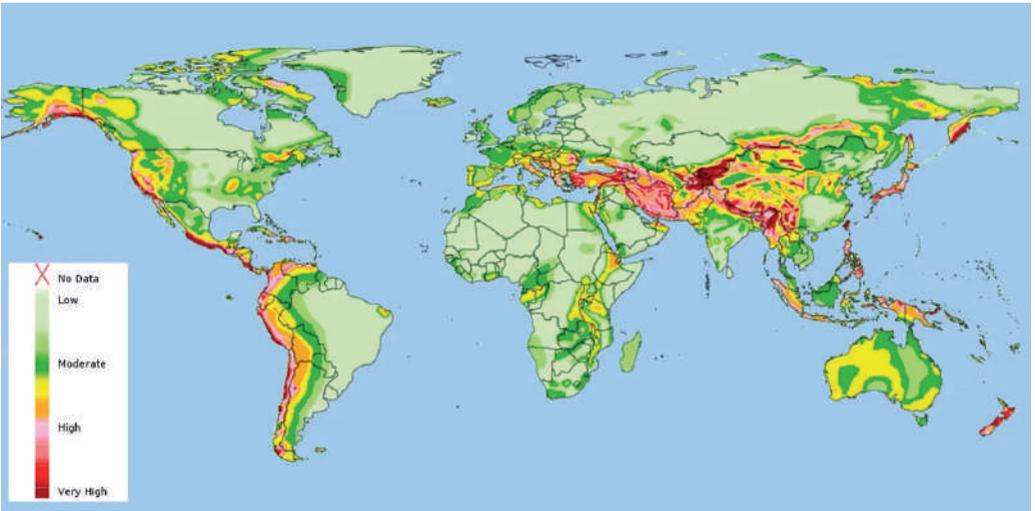
- › No outside help is needed. It has an emergency system as standard, which allows, using gravity, to finish the journey to the nearest stop and open the doors.
- › Evacuation maneuver that can be performed by trained personnel, but not necessarily specialized.
- › Easy accessibility from ground floor to emergency valve..
- › The hydraulic lift ensures an easy and safe rescue; because in the face of an electrical outage, passengers are released without the need for external help thanks to an emergency system integrated in the hydraulic equipment through which, the hydraulic lift descends to the nearest stop using the force of gravity.
- › In an electric elevator external help is essential to free passengers using a lot of energy and maneuvers. Due to its difficulty and the difficult access to the superior machinery, it is necessary that the personnel that carries out these maneuvers is specialized.



6.2 SEISMIC

- › It does not work with oscillating counterweights in the elevator shaft avoiding collisions with the cab.
- › Machinery at the base of the pit or engine room outside the elevator shaft. Eliminating the danger of machinery falling on the cabin.
- › In compliance with the level 1 required by Standard EN 81.77 by which the lift must be designed and manufactured taking into account the seismic degree of the area where it will be installed.
- › Hydraulic lifts require less intervention to comply with EN 81.77. Therefore, hydraulic lifts that comply with EN 81.77 have a competitive advantage in terms of construction and price compared to traction lifts that comply with the same law.

Map of seismic zones of the world







7. ECOLOGY

LIFE CYCLE (ITA)

ENVIRONMENTAL IMPACT STUDY

In order to see which elevator technology represents a greater environmental impact throughout the life cycle, a study has been carried out with the following conditions:

- › Lift type load 450 Kg and travel 10 m (3 stops), speed 0.5 m/s in hydraulic and 1 m/s in traction.
- › Use 1 (50 trips/day).
- › Use 2 (125 trips/day).
- › Based on PCR recommendations for elevators (international approach).
- › Expressed in: Kg CO₂, Kg CFC, Kg SO₂...
- › Summarize in ReCiPe points (includes all the above).

It covers all phases of the product, from the production of the components to the dismantling and recovery of materials.



Results of 20 years:

	USE - 1		USE - 2	
	Hydraulic	Traction	Hydraulic	Traction
Apr. 2019	Points	Points	Points	Points
Material consumption	1979	2218	1979	2218
Transportation purchase	15	19	15	19
Manufacturing	62	62	62	62
Distribution	20	29	20	29
Use, energy consumption	900	1074	1350	1256
Use, maintenance	636	636	636	636
Dismantling	0,45	0,48	0,45	0,48
TOTAL	3357	4037	3725	4172

Study carried out over a period of 20 years. Published in 2016 by the Technological Institute of Aragon

8. CONTACT

Office and warehouse schedule:

Monday to Thursday: 9:00 am – 5:00 pm

Friday: 8:00 am – 3:00 pm

Tel: +34 93 774 57 90

e-mail: comercial@es.gmvgrupo.com

www.gmveurolift.es

Polígono Industrial Rosanes II C/ Luxemburgo, 7-17 08769 Castellví de Rosanes
(Barcelona) España.



GMV

to win together

GMV EUROLIFT S.A.U.

Polígono Industrial Rosanes II C/ Luxemburgo, 7-17
08769 Castellví de Rosanes (Barcelona) España.

Tel: +34 93 774 57 90
e-mail: comercial@es.gmvgrupo.com
www.gmveurolift.es