

eMOTION

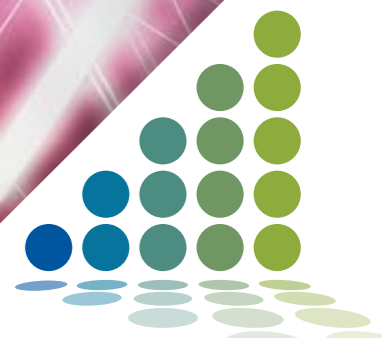
**OTIS**  
United Technologies

www.otis.com

**OTIS**  
United Technologies

Otis reserves the right to change any part of this specification without prior notice.  
The product colors in this brochure are representative not exact.  
All rights reserved.

**THE WAY TO GREEN™**



## BENEFITS

- Precise floor levelling eliminating tripping hazards
- Ride quality and comfort
- Compliance with latest codes and standards.
- State of the art technology
- Load weighing
- Optional door protection
- Overload circuit breaker which controls the power supply and in case of any spike switches the lift off from normal operation to avoid potential lift damage
- Reduced line current
- Electric braking in combination with variable frequency drive

eMOTION product range	
Speed	
4.00 m/s	
3.50 m/s	
3.00 m/s	
2.50 m/s	
2.00 m/s	
1.75 m/s	
1.50 m/s	
1.10 m/s	
1.00 m/s	
0.50 m/s	
LOAD	
NO. OF PERS.	
320 kg	4
450 kg	6
630 kg	8
800 kg	10
1000 kg	13
1275 kg	16
1600 kg	21
2000 kg	26
2500 kg	33

## eMOD Traction

Our pre-engineered controller and electrical package designed for traction elevators represents our state of the art way to increase safety standards and the life time of your existing lifts with minimal builder's works and tenant disruption. The drive system estimates the load in the lift car by measuring the current the motor requires the controller is then able to make fine adjustments to the voltage and frequency ensuring a smooth ride. The levelling accuracy which is typically  $\pm 3$  mm is achieved via a new positioning and reference system (PRS)

## Performance and comfort

The heart of the product is our variable frequency drive which improves ride comfort regardless of load, is quieter in operation, reduces noise emissions into the building and is easy to modify to suit the user's needs. By replacing the existing relay controller with a microprocessor controller the reliability of the lift can be increased as well as levelling and stopping accuracy which does not depend on the load of the lift.

One other advantage is that the existing car operating panel and landing fixtures can also be retained in most circumstances. Incorporated system diagnostics analyse possible issues with the lifts which assists our engineers in carrying out repairs in a timely manner minimising disruption for the tenants. The system is provided with a new position and reference systems PRS that replaces the existing limit switches on each floor.

The PRS system determines the accurate position of the lift during the whole lift travel monitoring the speed and if anything unpredictable occurs then the lift will automatically slow down and stop.

## Safety First

This upgrade package improves ride quality and the stopping accuracy via a variable frequency drive which is set up to ensure the lift operates to its optimum. The product comes with safety features such as limit switches, stop switches, an overload circuit breaker and new positioning reference system but there are also additional features available as options to further improve safety such as electronic door protection and an overload device. These features allow potential risks to be identified and dealt with.

## TECHNICAL PARAMETERS

Parameter	Minimum	Maximum	Remark
Type of the lift	traction		-
Roping	1:1	2:1	-
Speed	$\leq 0,63$ m/s for 1speed motion $\leq 1,2$ m/s for 2speed motion $\leq 1,2$ m/s for variable frequency motion with open loop drive (VF CRO) $\leq 1,75$ m/s for variable frequency motion with close loop drive (VR CRC)		-
Operation controller	SAPB (simple) / DCL (down-collected) / FCL (full-collected)		-
Units in group	1	5	-
No. of stops	$\leq 16$ stops		$\leq 24$ on contract basis
Rise	$\leq 50$ m for 1/2 speed motion $\leq 25$ m for variable frequency motion with open loop drive (VF CRO), speed $< 1,0$ m/s $\leq 45$ m for variable frequency motion with open loop drive (VF CRO), speed $\geq 1,0$ m/s $\leq 50$ m for variable frequency motion with close loop drive (VR CRC)		$\leq 75$ m on contract basis
Power (max.)	5 kW	22 kW	Depends on lift characteristic
Starts per hour	-	180	-
Fight time (3m run)	-	5,5 sec	-
Floor levelling	$\pm 5$ mm (with VF CRO) $\pm 3$ mm (with VF CRC)		-
Power supply	380 V / 400 V / 415 V, 3 Ph, 50 / 60 Hz		-
Number of car entrances	1	2	Depends on lift characteristic
Door arrangement	automatic – automatic (central opening) CLD automatic – automatic (side opening) TLD automatic – manual (no retiring cam) ACG-1 automatic – manual (with retiring cam) ACG-2		Depends on lift characteristic
Earthing	TNS (fi ve wire net) / TNC (four wire net)		Depends on lift characteristic
Speed encoder	No	Yes	-

### MACHINE ROOM



- controller
- overload circuit breaker
- emergency rescue operation box

### HOISTWAY



- hoistway harness and connecting cables with its trunking
- limit switches
- hoistway lighting (optional)
- position and reference system

### CAR ROOF



- junction box with emergency power unit (12V)
- top of car inspection box
- load weighing device (optional)

### CAR



- car operating panels (optional)

### HALL



- hall fixtures

### PIT

- pit emergency switch
- pit power socket PHS (optional)

## SYSTEM ELEMENTS

The standard package contains following electrical parts of elevator

### MACHINE ROOM

- microprocessor controller
- emergency rescue operation box
- overload circuit breaker with or w/o FI
- machine room wiring and its trunking
- digital speed encoder (optional)
- intercommunication unit (optional)
- machine room position device (optional)
- main service disconnecting switch (optional)

### HOISTWAY

- hoistway harness and connecting cables with its trunking
- limit switches

- PRS system (tape reader, magnets, steel tape, fixing material)
- alarm horn (optional)
- hoistway lighting (optional)

### CAR

- 2 travelling cables
- junction box with emergency power unit (12V)
- top of car inspection box
- limit switches + cams (optional)
- load weighing device (optional)
- intercommunication unit (optional)
- voice synthesizer (optional)
- car wiring



- car operating panels – (separate package, see next OTIS compatible products)

### HALL

- hall fixtures (separate package, see next OTIS compatible products)

### PIT

- pit emergency switch
- pit power socket PHS (optional)
- tension device switch