

# VTL-E

## Open cooling towers



### Key benefits

- Low height
- Easy installation
- Quiet



### VTL-E characteristics

Counter flow, centrifugal fan, forced draft

### Capacity range

3 - 130 l/s

### Water distribution

Pressurized

### Maximum entering water temperature

55°C standard fill  
65°C with alternative fill

### Typical applications

- Small to medium HVAC and industrial applications
- Installations with extremely low height requirements
- Indoor installations
- High temperature industrial applications
- Tight enclosures & installations requiring a single air inlet



## Low height

- **Very low height:** fits perfectly on **roof tops** or tight enclosures.

## Easy installation

- VTL-E towers are factory-assembled. We ship in **one piece** for **easy on-site lifting and installation**.
- VTL-E offers high capacity and minimum operating weight. **Save on steel supports**, both underneath the equipment and in the building itself for rooftop installations.
- Single-side air inlet lets you install **next to solid walls**.
- Units housable **indoors** thanks to centrifugal fans allowing intake or discharge ductwork.

## Ideal for a quiet operation

- VTL-E units include **quiet internal centrifugal fans** for minimal surrounding noise.
- Single-side air inlet, and a **quieter tower rear** for more noise-sensitive areas.
- Cut operation noise still further with factory-designed and tested [sound attenuators](#) or silencers.

## Year-round reliable operation

- Various corrosion-resistant materials, including the unique [Baltibond hybrid coating](#) for guaranteed long service life.
- Optional [Baltiguard Drive System](#) for energy savings and less noise during low load (night). A perfect stand-by system in case of motor failure.
- The thermal performance of VTL-E is [Eurovent certified](#).

## Easy to maintain

- **Easy access** to all the mechanicals, including fan shaft bearings.
- [BACount individual bundled fill sheets](#) for easy and complete inspection or cleaning preventing full replacement of fill bundles.

Interested in the VTL-E cooling tower for cooling your process water? Contact your local [BAC representative](#) for more information.

## Downloads

- [VTL-E compilation.pdf \(EN\)](#)
- [M - VTL-E \(EN\)](#)



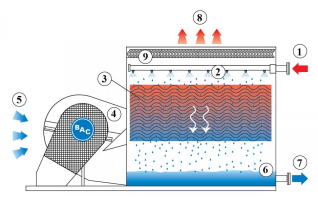
- [R - VTL-E \(EN\)](#)

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### Principle of operation

Warm process **water (1)** from the heat source enters the **spray system (2)** at the top of the cooling tower where it is distributed over the **fill** or heat transfer media **(3)** . At the same time the **centrifugal fan (4)** blows ambient **air (5)** upwards through the tower. While the warm process water contacts the cold air the latter heats up and part of the process water is evaporated which removes the heat from the remaining water. The tower **sump (6)** or basin collects the **cooled water (7)** after which it returns to the heat source of the process. The warm saturated **air (8)** leaves the tower through the **drift eliminators (9)**, which remove water droplets from the air.



**Want to use the VTL-E cooling tower to cool your proces water?**  
Contact your local [BAC representative](#) for more information.

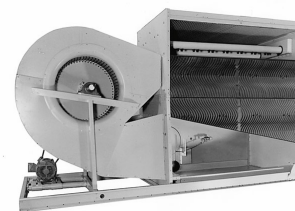
# VTL-E

## Open cooling towers

### Construction details

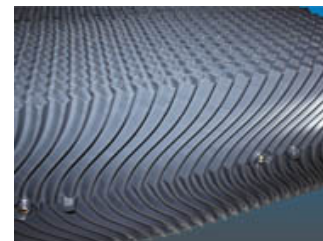
#### 1. Material options

- Heavy-gauge hot-dip galvanized steel is used for external unit steel panels and structural elements featuring [Baltiplus Corrosion Protection](#).
- The unique [Baltibond hybrid coating](#) is an optional extra. A hybrid polymer coating for longer service life, applied pre-assembly to all hot-dip galvanized steel components of the unit.
- Optional [stainless steel](#) panels and structural elements of type 304 or 316 for extreme applications.
- Or the economical alternative: a **water-contact stainless steel cold water basin**. Its key components and the basin itself are stainless steel. The rest is protected with the Baltibond hybrid coating.



#### 2. Heat transfer media

- Our heat transfer media is patented [BACount fill](#). Its thermal performance is proven during comprehensive [lab thermal performance tests](#), and it offers you unrivalled system efficiency.
- We divide the fill pack into **compact fill bundles** easier to remove and replace. Each includes individual fill sheets which are easy to dismantle for **thorough inspection and cleaning**, hence eliminating the need for frequent fill replacement.
- In self-extinguishing plastic, which will not rot, decay or decompose.
- For operation above 55°C, try our **optional high temperature fill**, usable with intake water up to 65°C.



### 3. Air movement system

- With motor-driven centrifugal fan and a **V-belt drive**. You can easily remove the entire motor base for proper belt tensioning to ensure constantly correct belt alignment. Together with the **heavy duty fan shaft bearings** this guarantees optimal operational efficiency. Single- and multi-speed **motors** available.
- **Centrifugal fan(s)** are forward-curved and nearly noiseless. Overcome external static pressure! Use [sound attenuators](#) and duct work etc. for air intake/discharge with no loss of thermal performance!
- **Our drift eliminators** come in UV-resistant plastic, which will not rot, decay or decompose and their performance is tested and **certified by Eurovent**. They are assembled in **easily handled and removable sections**, for optimal internal access.
- [Steel eliminators](#), protected with the unique [Baltibond hybrid coating](#), for optimal corrosion protection, are also available for specific applications.



### 4. Water distribution system

These consist of:

- A **header** and **spray branches** with wide non-clog plastic **nozzles**, secured by rubber **grommets**. You can easily remove, clean and flush both nozzles and spray branches.
- A cold water basin with:
  - **strainers** which are easy to lift out and the anti-vortexing device also helps stop trapped air
  - mechanical **make up**
  - circular **access door**



**Like to know more about the VTL-E construction details?** Contact your [local BAC representative](#).

# VTL-E

## Open cooling towers

### Options and accessories

Below is a listing of the main VTL-E options and accessories. If your required option or accessory is not listed, look no further than your [local BAC representative](#).



#### Plume abatement coil

A finned discharge coil is installed in your cooling tower discharge and piped in series with the wet coil. This **reduces or eliminates plumes**. [Read more](#)



#### Sound attenuation

Reducing noise at air intake and discharge points brings us closer to silent cooling equipment.

- The sound reductions obtained by HS sound attenuation are perfect for **residential** sound requirements.
- Heavy noise reductions can be achieved with HD sound attenuation, making it ideal for **rural** requirements. [Read more](#)



## Baltiguard drive system

With this, operate your system like a dual-speed motor, but with standby reserve capacity **to cope with any failure**. [Read more](#)



## Basin heater package

Thanks to our factory-installed heaters, the water stays at 4°C and **never freezes**, even during tower downtime and however cold it gets outside. [Read more](#)



## Electric water level control package

**For perfectly precise water level control**, replace the standard mechanical valve with our electrical water level controller. [Read more](#)



## Remote sump connection

The best way to **prevent a sump freezing** is to use the auxiliary remote variety within a heated area. Shutting off the circulating pump allows all the water in the water distribution, as well as that in suspension and the sump to drain freely to the auxiliary sump. [Read more](#)





## Discharge hood

Discharge hoods **reduce the risk of re-circulation** in tight enclosures by increasing discharge air velocity, and can be used to elevate the unit discharge above adjacent walls to comply with layout guidelines. [Read more](#)



## Positive closure dampers

Use positive closure dampers (PCD) **to minimize the heatloss due to convection** by preventing air flow through equipment that is shut down. [Read more](#)



## Steel drift eliminators

Steel drift eliminators are more **robust** than plastic alternatives. [Read more](#)



## Safety switch

Cuts power to motors **with safety in mind** during inspection or maintenance. [Read more](#)



## Clean out port

Clean out port **makes it easy to eliminate silt and sludge** from the cooling tower basin when cleaning and flushing the sump. [Read more](#)



## Filter

Separators and media filters efficiently **remove suspended solids** in the recirculating water, reducing system cleaning costs and optimizing water treatment results. Filtration helps you keep the recirculating water clean. [Read more](#)



## Sump sweeper piping

Sump sweeper piping **prevents sediment collecting in the cold water basin** of the unit. A complete piping system, including nozzles, is installed in the basin of the tower **for connection to side stream filtration** equipment. [Read more](#)



## Water treatment equipment

Devices to control water treatment are needed to ensure proper **cooling tower water care**. Not only does this help protect the components and fill pack, controlling corrosion, scaling and fouling, it also avoids the proliferation of harmful bacteria, including **legionella**, in the recirculating water. [Read more](#)



## Flanges

Flanges facilitate **pipng connections** on-site. [Read more](#)

# VTL-E



## Open cooling towers

### Engineering data

**REMARK:** Do not use for construction. Refer to factory certified dimensions & weights. This page includes data current at the time of publication, which should be reconfirmed at the time of purchase. In the interest of the product improvement, specifications, weights and dimensions are subject to change without notice.

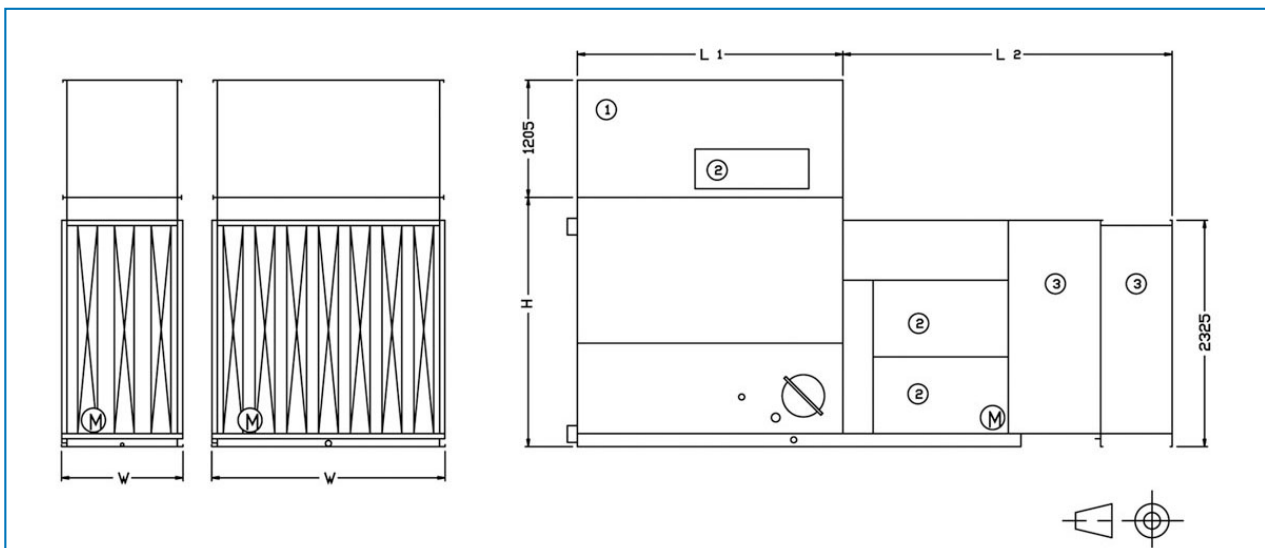
### General notes

1. All connections 100 mm and smaller are MPT. Connections 200 mm and larger than 100 mm are bevelled-for-welding.
2. Fan kW is at 0 Pa ESP. To operate against external static pressure up to 125 Pa, consult your BAC representative for size and location.
3. Make up, overflow, suction, drain connections and access door can be provided on side opposite to that shown, consult your BAC representative.
4. Unit height is indicative, for precise value refer to certified print.
5. Shipping/operating weights indicated are for units without accessories such as sound attenuators, discharge hoods, etc. Consult factory certified prints to obtain weight additions and the heaviest section to be lifted.

### [VTL-E cooling tower performance at standard conditions](#)

**Last update:** 28 February 2018

### Sound attenuation HD



1. Discharge attenuator; 2. Access Door; 3. Intake attenuator; H & W: unit height and width (see engineering data).

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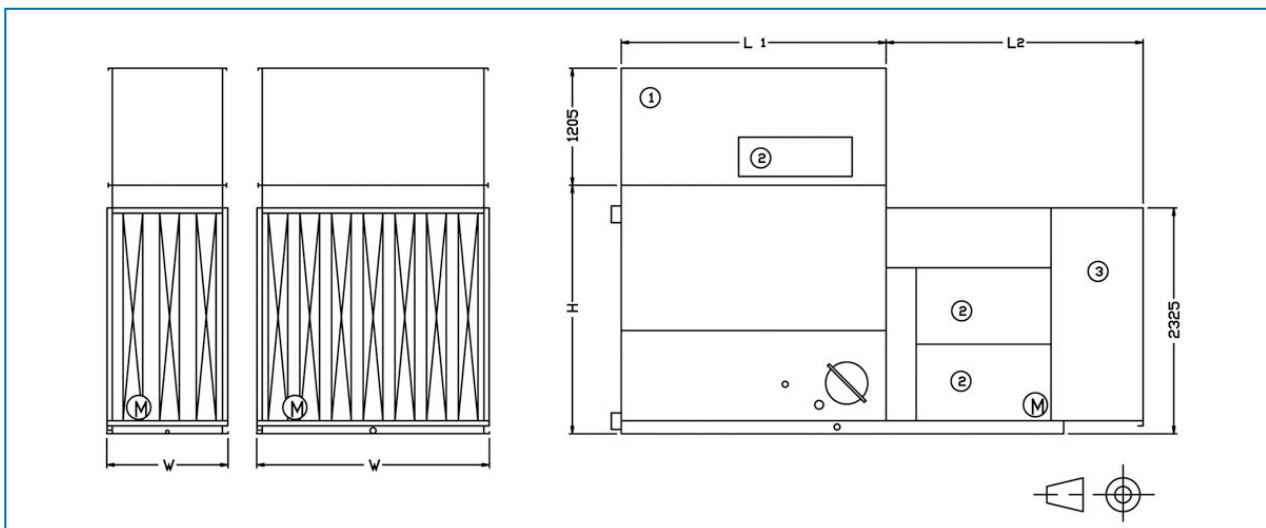
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### [VTL-E cooling tower performance at standard conditions](#)

**Last update:** 28 February 2018

### Sound attenuation HS



1. Discharge attenuator; 2. Access Door; 3. Intake attenuator; H & W: unit height and width (see engineering data).



# VTL-E



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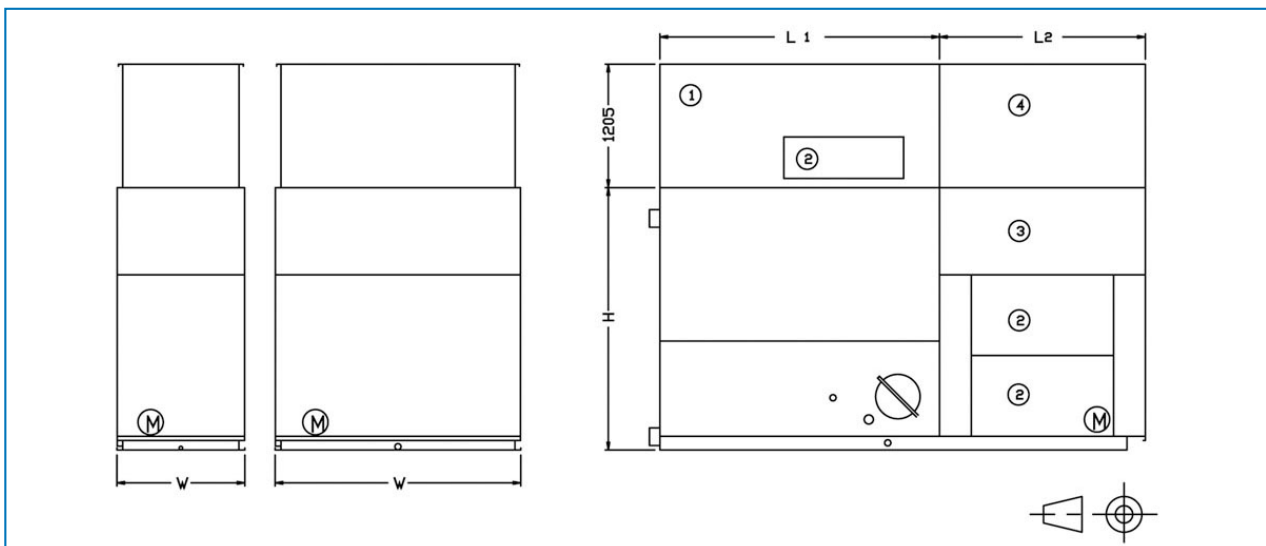
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### [VTL-E cooling tower performance at standard conditions](#)

**Last update:** 28 February 2018

### Sound attenuation VS



1. Discharge attenuator; 2. Access Door; 3. Intake attenuator; 4. Plenum; H & W: unit height and weight (see engineering data).

# VTL-E



## Open cooling towers

### Engineering data

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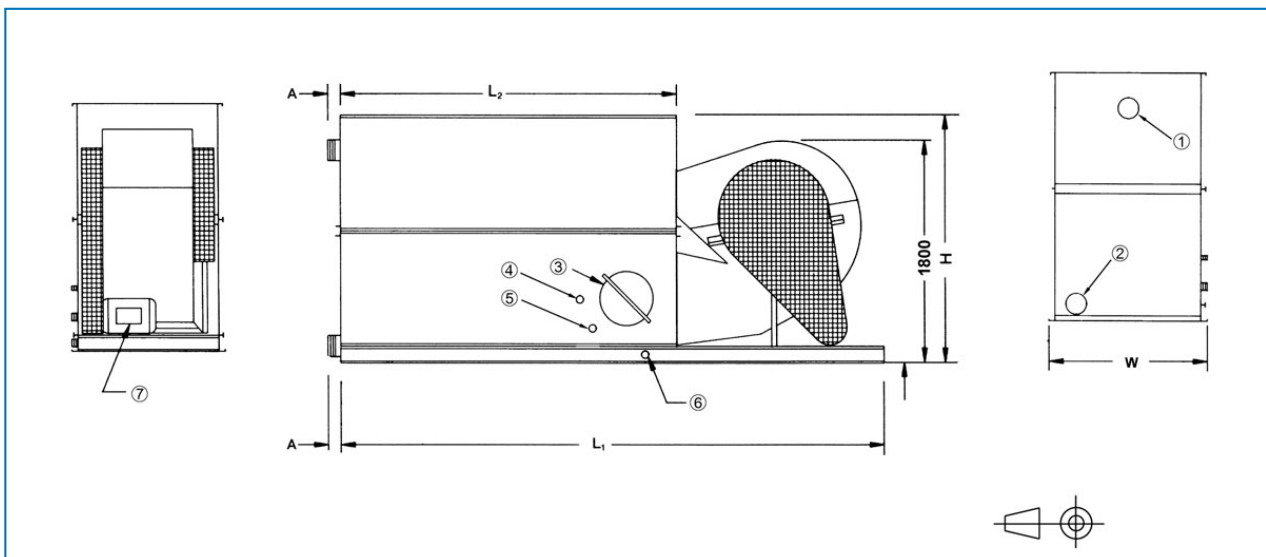
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### [VTL-E cooling tower performance at standard conditions](#)

**Last update:** 28 February 2018

### VTL-E 039G-137M



1. Water Inlet; 2. Water Outlet; 3. Access Door; 4. Make up ND25; 5. Overflow ND50; 6. Drain ND50; 7. Fan Motor. Overflow connection is 80 mm on models VTL-E 086L, VTL-E 094M and VTL-E 103K through VTL-E 137M.



Model	Weights (kg)			Dimensions (mm)				Air Flow (m³/s)	Fan Motor (kW)	Fluid Inlet ND (mm)	Fluid Outlet ND (mm)	Make Up ND (mm)
	Oper. Weight (kg)	Ship. Weight(kg)	Heaviest Section (kg)	L1	L2	W	H					
VTL-E 039-G	1200	720	720	3350	1820	1250	1560	7.0	(1x) 2.2	(1x) 100	(1x) 100	(1x) 25
VTL-E 045-H	1230	750	750	3350	1820	1250	1560	8.0	(1x) 4.0	(1x) 100	(1x) 100	(1x) 25
VTL-E 051-G	1279	799	799	3350	1820	1250	1990	6.3	(1x) 2.2	(1x) 100	(1x) 100	(1x) 25
VTL-E 059-H	1290	810	810	3350	1820	1250	1990	7.3	(1x) 4.0	(1x) 100	(1x) 100	(1x) 25
VTL-E 066-J	1320	840	840	3350	1820	1250	1990	8.1	(1x) 5.5	(1x) 100	(1x) 100	(1x) 25
VTL-E 072-K	1330	850	850	3350	1820	1250	1990	8.8	(1x) 7.5	(1x) 100	(1x) 100	(1x) 25
VTL-E 056-G	1369	889	889	3350	1820	1250	2480	5.632	(1x) 2.2	(1x) 100	(1x) 100	(1x) 25
VTL-E 065-H	1380	900	900	3350	1820	1250	2480	6.625	(1x) 4.0	(1x) 100	(1x) 100	(1x) 25
VTL-E 073-J	1401	921	921	3350	1820	1250	2480	7.537	(1x) 5.5	(1x) 100	(1x) 100	(1x) 25
VTL-E 079-K	1410	930	930	3350	1820	1250	2480	8.3	(1x) 7.5	(1x) 100	(1x) 100	(1x) 25
VTL-E 058-G	1688	978	978	4560	2730	1250	1990	7.149	(1x) 2.2	(1x) 150	(1x) 150	(1x) 25
VTL-E 067-H	1699	989	989	4560	2730	1250	1990	8.48	(1x) 4.0	(1x) 150	(1x) 150	(1x) 25
VTL-E 076-J	1720	1010	1010	4560	2730	1250	1990	9.7	(1x) 5.5	(1x) 150	(1x) 150	(1x) 25
VTL-E 082-K	1740	1030	1030	4560	2730	1250	1990	10.6	(1x) 7.5	(1x) 150	(1x) 150	(1x) 25
VTL-E 092-L	1773	1063	1063	4560	2730	1250	1990	11.78 9	(1x) 11.0	(1x) 150	(1x) 150	(1x) 25
VTL-E 066-G	1809	1099	1099	4560	2730	1250	2480	6.647	(1x) 2.2	(1x) 150	(1x) 150	(1x) 25
VTL-E 078-H	1820	1110	1110	4560	2730	1250	2480	8.007	(1x) 4.0	(1x) 150	(1x) 150	(1x) 25
VTL-E 088-J	1841	1131	1131	4560	2730	1250	2480	9.109	(1x) 5.5	(1x) 150	(1x) 150	(1x) 25
VTL-	1850	1140	1140	4560	2730	1250	2480	10.0	(1x)	(1x)	(1x)	(1x)





E 095-K									7.5	150	150	25
VTL- E 107-L	1883	1173	1173	4560	2730	1250	2480	11.36	(1x) 11.0	(1x) 150	(1x) 150	(1x) 25
VTL- E 117-M	1903	1193	1193	4560	2730	1250	2480	12.59 6	(1x) 15.0	(1x) 150	(1x) 150	(1x) 25
VTL- E 070-J	2008	1078	1078	5480	3650	1250	1560	11.11	(1x) 5.5	(1x) 150	(1x) 150	(1x) 25
VTL- E 077-K	2017	1087	1087	5480	3650	1250	1560	12.32	(1x) 7.5	(1x) 150	(1x) 150	(1x) 25
VTL- E 086-L	2050	1120	1120	5480	3650	1250	1560	14.0	(1x) 11.0	(1x) 150	(1x) 150	(1x) 25
VTL- E 094-M	2060	1130	1130	5480	3650	1250	1560	15.4	(1x) 15.0	(1x) 150	(1x) 150	(1x) 25
VTL- E 094-J	2141	1211	1211	5480	3650	1250	1990	10.76 3	(1x) 5.5	(1x) 150	(1x) 150	(1x) 25
VTL- E 103-K	2150	1220	1220	5480	3650	1250	1990	11.8	(1x) 7.5	(1x) 150	(1x) 150	(1x) 25
VTL- E 116-L	2180	1250	1250	5480	3650	1250	1990	13.3	(1x) 11.0	(1x) 150	(1x) 150	(1x) 25
VTL- E 126-M	2190	1260	1260	5480	3650	1250	1990	14.5	(1x) 15.0	(1x) 150	(1x) 150	(1x) 25
VTL- E 102-J	2278	1348	1348	5480	3650	1250	2480	10.21 2	(1x) 5.5	(1x) 150	(1x) 150	(1x) 25
VTL- E 111-K	2287	1357	1357	5480	3650	1250	2480	11.19 1	(1x) 7.5	(1x) 150	(1x) 150	(1x) 25
VTL- E 126-L	2320	1390	1390	5480	3650	1250	2480	12.8	(1x) 11.0	(1x) 150	(1x) 150	(1x) 25
VTL- E 137-M	2330	1400	1400	5480	3650	1250	2480	13.6	(1x) 15.0	(1x) 150	(1x) 150	(1x) 25