



# Vermaport® Cart Conveyor

Technical Brochure



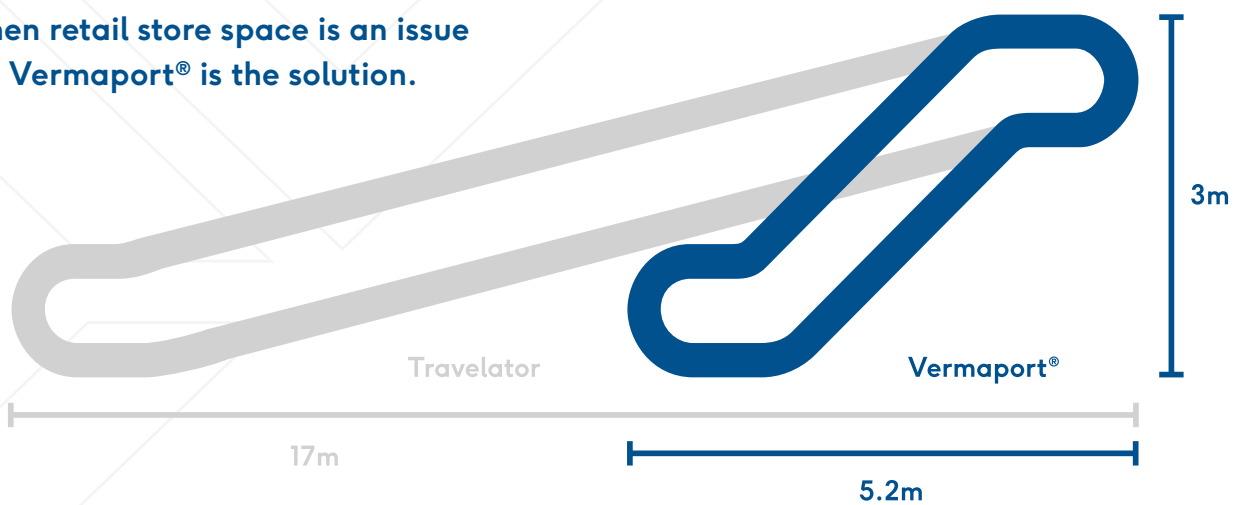
# Vermaport® SC - Shopping Cart Conveyor - Why?

- To increase retail floor space
- To increase foot fall and traffic flow in store
- To increase profitability
- Safety

The Vermaport® SC has a proven track record of safety, improving the shopping / retail experience for customers and is a major influencing factor in increasing store sales and profits.

Existing customers have identified that any downtime of their Vermaport® SC has a major impact on the amount of cash going into the register. Several of our customers have Vermaports® which convey over 1 million shopping carts per annum in their stores.

**When retail store space is an issue the Vermaport® is the solution.**



Using a Vermaport® as opposed to a travelator enables you to **save around 11.8 m2 of space**

## Peak Handling Capacity

1No. - Vermaport® SC  
1No. - 13 person 1000 kg (2200 lbs) lift

600-800 carts per hour  
111 carts per hour (2 carts per journey)

## Space Comparison

Vermaport® and escalator = 12m2

6x13P - Passenger lifts = 32m2

Based on single direction journeys only (floor to floor of 3m). Having both directions will double the footprint of the Vermaport® and escalator, but will reduce the throughput of carts by lift.

Payback calculations available from [vermaport.com](https://www.vermaport.com)  
or contact our **Sales Team** for further information

# Vermaport® Key Features

## Energy Conservation – Through Timer / ECO Mode

After 60-90 seconds, the unit will automatically go into ECO Mode.

## Cart / Shopper Segregation

In the event of any kind of emergency or disaster, shopping carts can be abandoned on the unit whilst Shoppers exit the store safely.

## Safety Gates – Top & Bottom

Stops any unauthorised access onto the unit. Act as a barrier should there be any 'runaway' with the cart on the unit.

## Auto STOP / START Controls

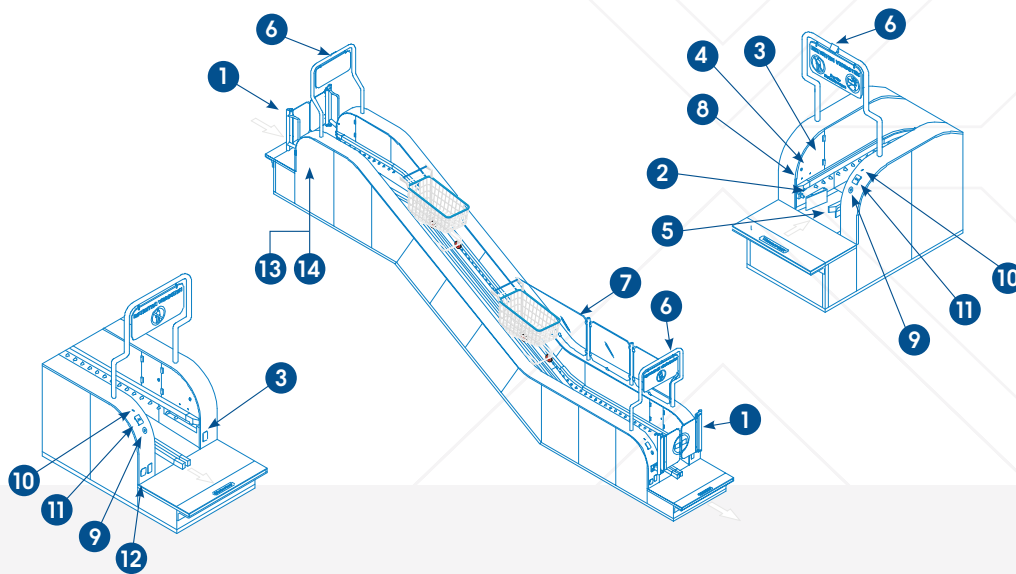
Allows the store to instantly STOP or RESTART the unit.

## Longevity

Initial operational life of the units is 20-30 years, if maintained correctly.

## Dual Drive

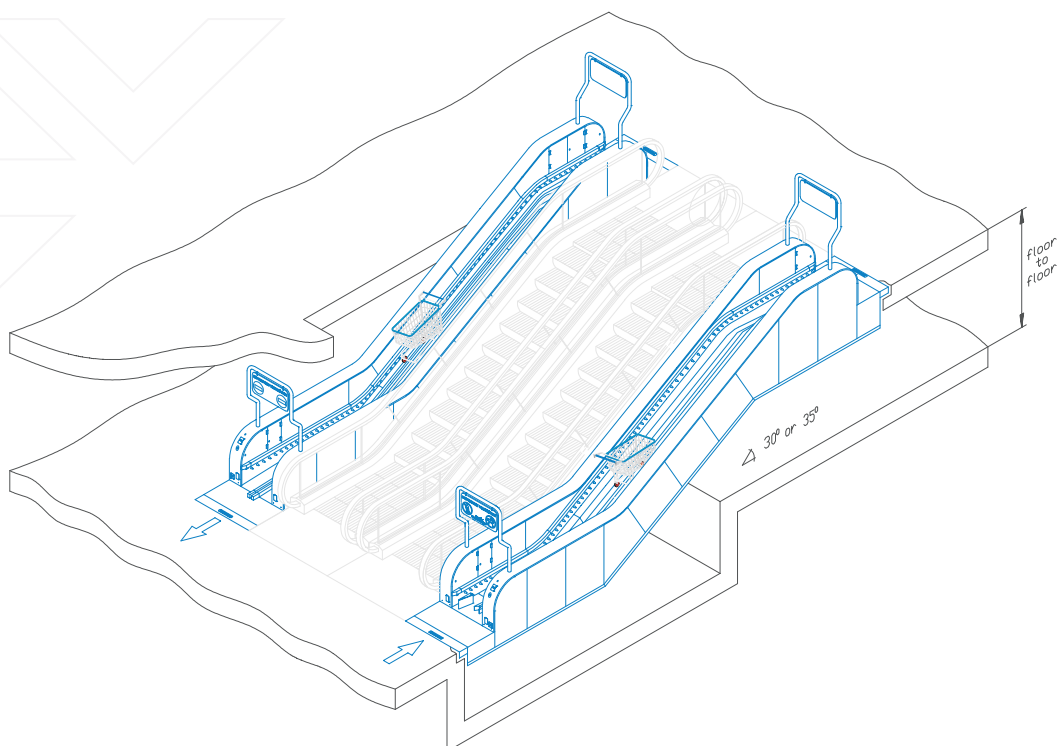
Motor and dual chain work together to assist the movement of the carts along the unit



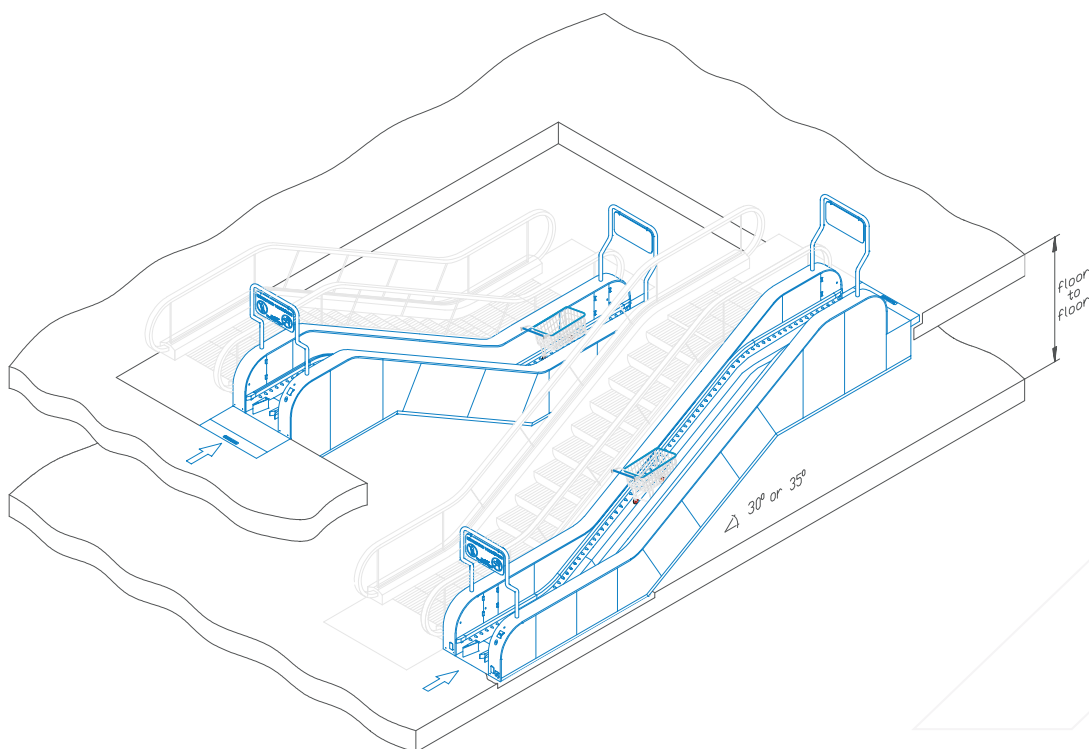
## Safety Features (User) Operator Features

- 1 Inlet / Outlet Gate** – stops any unauthorised entry onto the unit
- 2 Cart Control Wedges** – Guides carts through the entrance, into correct position for alignment on the guide pin guide rail
- 3 Light Beams** – detect entry of shopping cart in sequence allowing operation to commence – also detects foreign object in the unit and STOPs operation
- 4 Rear Leg Sensors** – detects rear leg of cart has entered unit, enabling the system to reset the Locker Pin ready for the next cart to enter
- 5 Nested Cart** – Sensors will detect and STOP the unit should 'nested carts' try to enter the unit
- 6 Portal Frame Signage** – works as a load limiter for shopping carts. Also shows Information on use of the unit
- 7 Plexi-glass** – offered as an option. Acts as a deterrent / guard for Shoppers should any stray or projectile object try to enter along the side of the units
- 8 Locker Pin** – ensures that there is a safe gap between each shopping cart travelling on the unit. Should 'nesting' occur, the Locker Pin will engage and the cart will not operate
- 9 Key Switch** – located on the upper and lower frontage of the units
- 10 LED Display** – displays any faults on the units with a digital number
- 11 Emergency STOP** – allows store to instantly STOP the unit in a case of an emergency. Located at the top and bottom
- 12 Chain Tension (Bottom)** – instant light indicator for tension of chains. GREEN tension OK. RED tension needs adjusting
- 13 Control Panel** – lockable control panel for easy access
- 14 Drive Station** – allows easy access for maintenance of unit

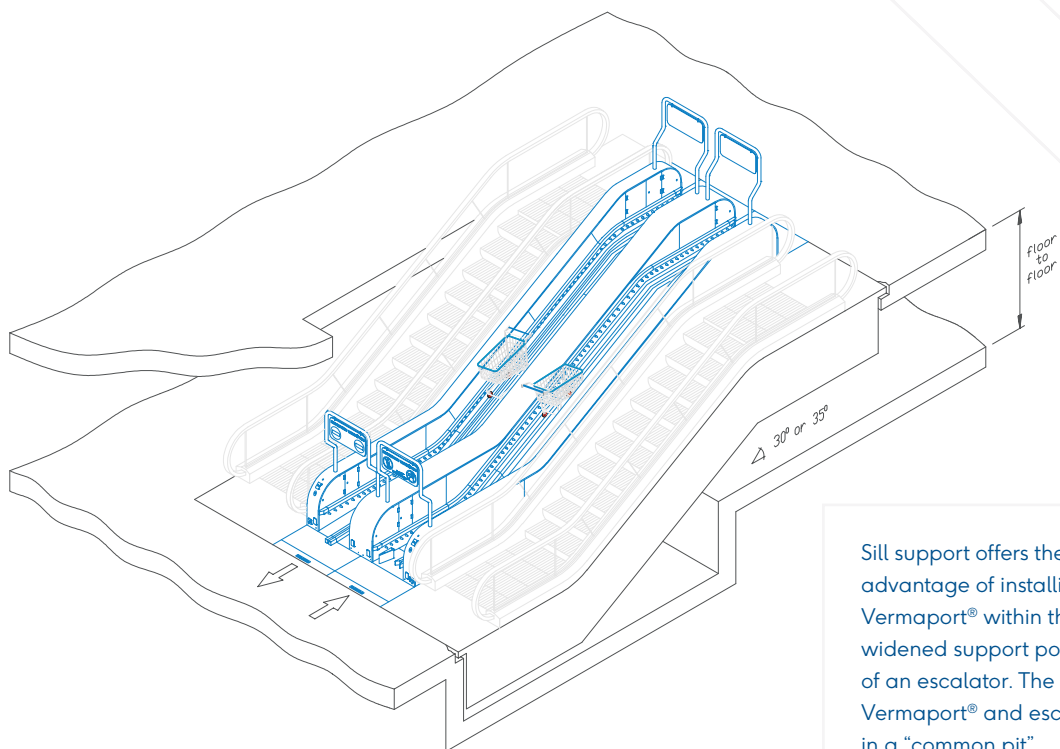
## Vermaport® for installation alongside escalators



## Vermaport® criss-cross arrangement for use with an escalator

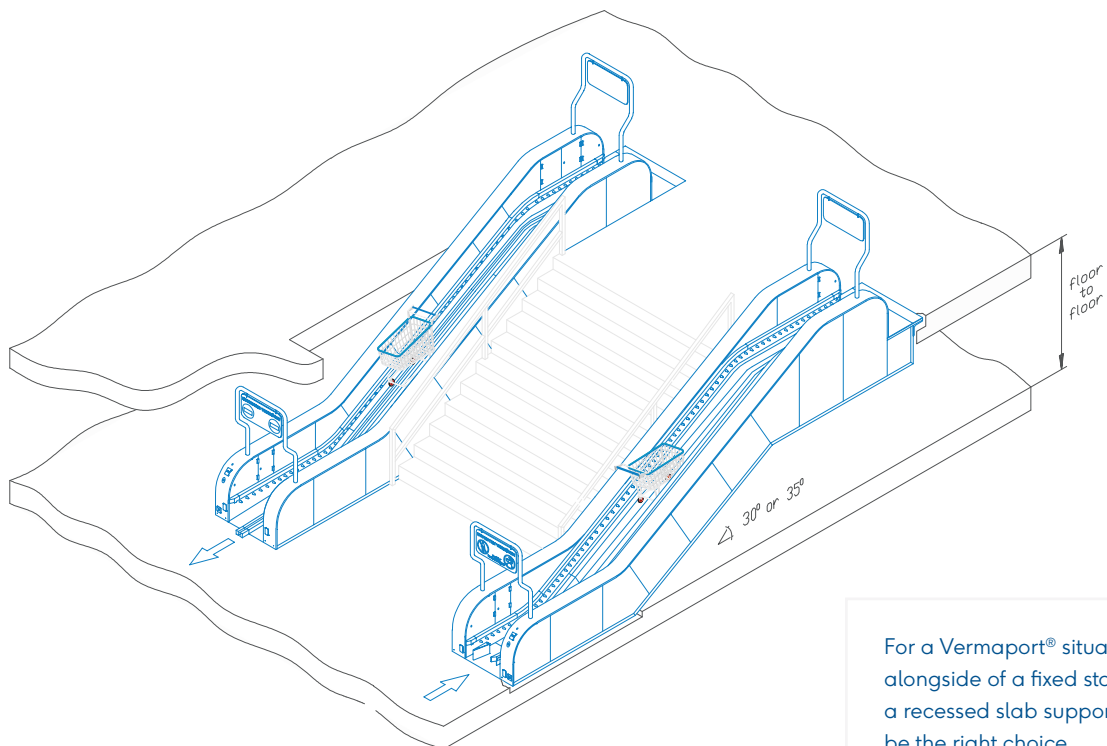


## Vermaport® for use between escalators



Sill support offers the advantage of installing Vermaport® within the widened support pocket of an escalator. The lower end Vermaport® and escalator sit in a "common pit".

## Vermaport® for use with staircase

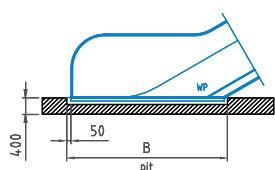
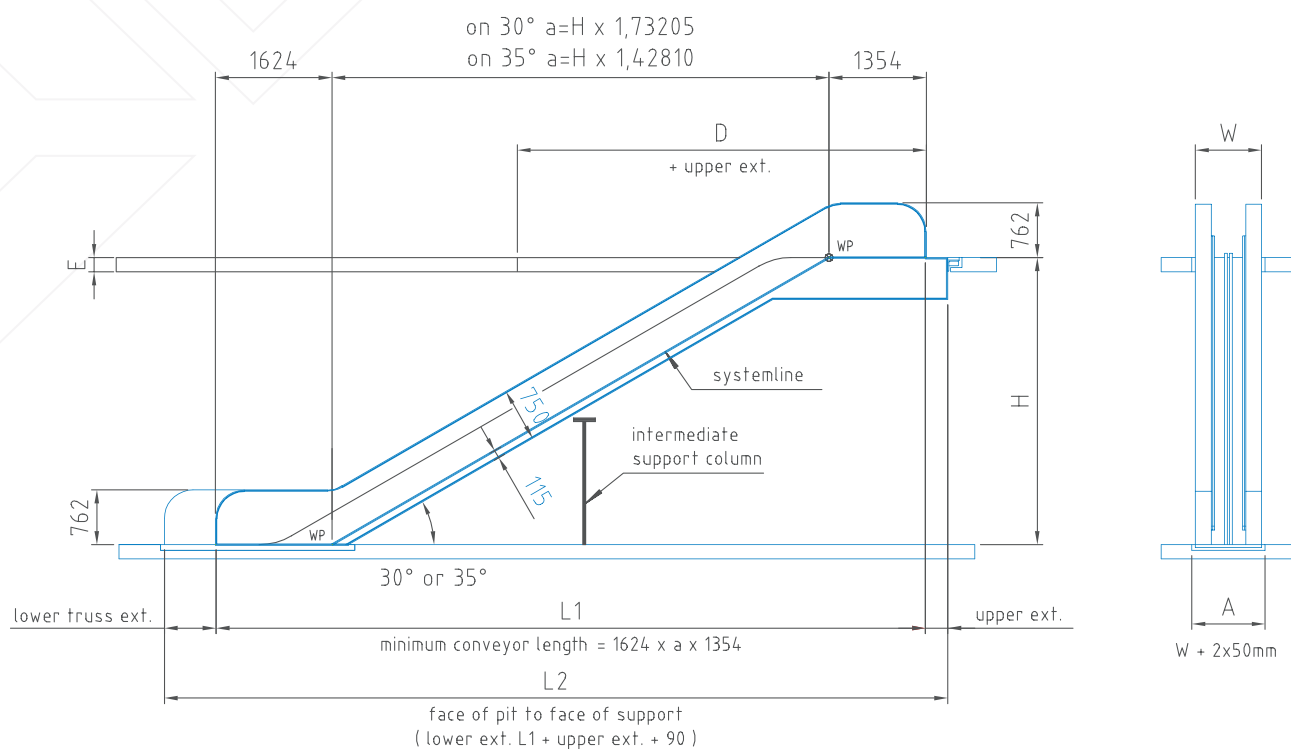


For a Vermaport® situated alongside of a fixed staircase, a recessed slab support will be the right choice.

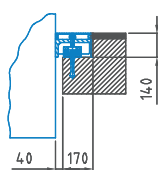


# Technical Data

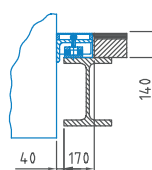
## Technical data for a Vermaport® with recessed slab (Type R)



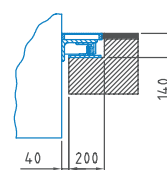
Lower recessed slab details



Concrete support beam



Steel support beam

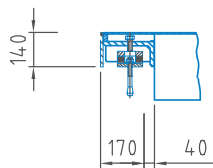
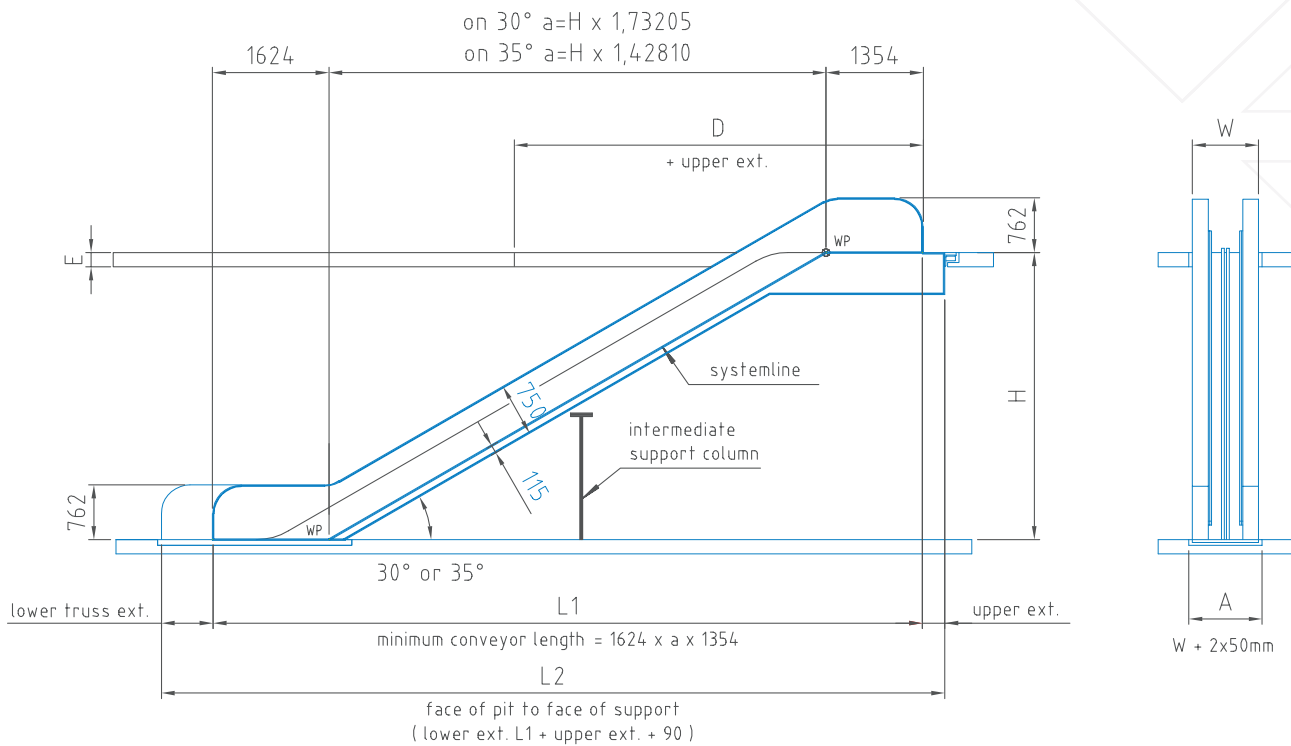


Support beam (seismic)

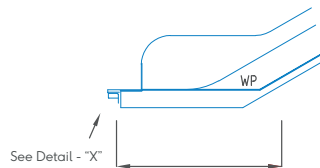
H Floor to Floor	L1 Total Length	F1 Upper Force Reaction	F2 Lower Force Reaction	L1 Total Length	F1 Upper Force Reaction	F2 Lower Force Reaction
mm	mm	kN	kN	mm	kN	kN
1000	4630	11.3	12.4	4326	10.7	11.8
1500	5496	13.1	14.3	5040	12.4	13.4
2000	6362	15	16.3	5754	13.9	15.2
2500	7228	16.8	18.4	6468	15.6	17.0
3000	8094	19.3	21.1	7182	17.8	19.3
3500	8960	21.1	23	7897	19.3	21.1
4000	9826	23	25.1	8611	20.9	22.8
4500	10692	25.4	27.8	9325	23	25.2
5000	11558	27.4	29.8	10039	24.7	27.0
5500	12424	29.2	31.8	10753	26.3	28.7
6000	13290	31.1	33.8	11467	28	30.5
6500	14156	32.9	35.9	12181	29.5	32.3
7000	For floor to floor heights greater than 6.5m, intermediate support may be required			12895	31.1	33.0
				For floor to floor heights greater than 7m, intermediate support may be required		

# Technical Data

## Technical data for a Vermaport® with sill support (Type S)



Lower support details



Pit Dimensions as per escalator

H Floor to Floor	L1 Total Length	F1 Upper Force Reaction	F2 Lower Force Reaction	L1 Total Length	F1 Upper Force Reaction	F2 Lower Force Reaction
mm	mm	kN	kN	mm	kN	kN
1000	4630	14.3	15.6	4326	13.7	14.9
1500	5496	16.1	17.5	5040	15.4	16.7
2000	6362	18.0	19.6	5754	16.9	18.5
2500	7228	19.9	21.6	6468	18.5	20.2
3000	8094	22.3	24.2	7182	20.6	22.6
3500	8960	24.1	26.3	7897	2.6	24.4
4000	9826	25.9	28.3	8611	23.9	26.0
4500	10692	28.4	31.1	9325	26.0	28.4
5000	11558	30.2	33.0	10039	27.7	30.5
5500	12424	32.2	35.0	10753	29.3	31.9
6000	13290	34.0	37.1	11467	30.8	33.7
6500	14156	35.9	39.1	12181	32.5	35.4
7000	For floor to floor heights greater than 6.5m, intermediate support may be required			12895	34.2	37.6
				For floor to floor heights greater than 7m, intermediate support may be required		

# Shopping Cart Options

**At Vermaport® we have already worked extensively with a large number of cart manufacturers throughout the world including Wanzl, Rehrig, Precision Wire, United Steel & Wire, Tote, Caddie, Versacart, Transcart, Clarecart and Siegel. These manufacturers have pre-approved carts which can be found on table 2 in appendix 1.**

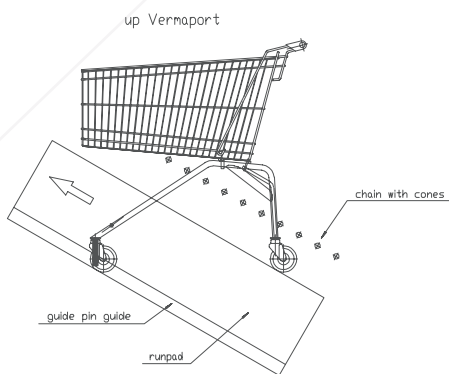
New carts and alternative carts can be checked and validated by our design office for suitability and use with a new or existing Vermaport®. We will check the geometry of the cart compared to the layout of the sensors and detectors to ensure correct operation. (It is advisable for Vermaport® to be consulted alongside the cart manufacturer for any new proposals.)



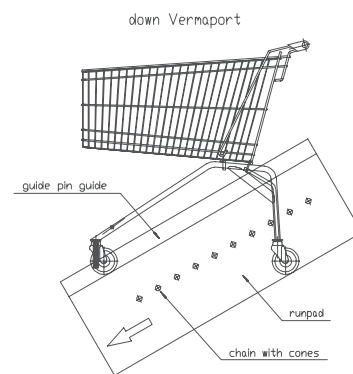
**Typical acceptable cart  
(With guide pin)**



**Not acceptable  
(Due to underside tray)**



Carts can be provided with fixed or revolving wheels. Fixed wheels are the preference for the Vermaport®. There is no requirement for the wheels to have brakes or braking options on them.



Entry wedges are provided at the 'inlet' to the unit to centralise and position the guide via the front wheels. This also aligns the rear wheels as the cart completes entry into the unit. The wedges act as a safety barrier, potentially preventing non-compatible carts entering the unit.

## Cart Safety

**NO CART** should have an underside tray or storage area beneath the basket or child stand plate

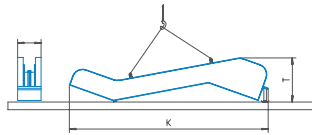
**NO CHILDREN** should be transported in the shopping cart during its transportation on the Vermaport®

**PARTICULAR REFERENCE SHOULD BE MADE TO HANDBAGS, ENSURING THAT ARE REMOVED FROM HANGERS ON CARTS WHILST CART IS TRAVELLING ON THE 'DOWN' VERMAPORT® UNIT.**

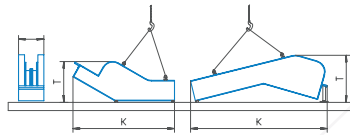


# Transportation & Installation Details

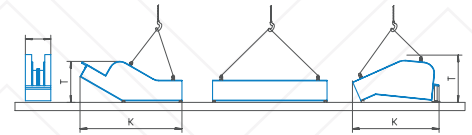
**Vermaports® can be manufactured and transported in any number of pieces, but typically as a single piece unit, two pieces or three pieces (as per the sketches below).**



**One piece** (recessed)



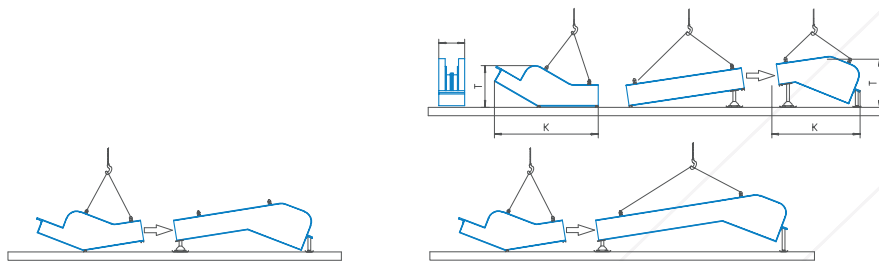
**Two piece** (sill support)



**Three piece** (sill support)

Typically, new units are shipped in open top containers for crane loading at the factory and removal of the sections at the job site. The multiple pieces allow for the movement of the unit around the job site whilst creating the least disruption possible.

Assembly is then carried out as per the sketches below, when the full unit is hoisted into the final position on site.



Vermaports® are shipped with all necessary stands and transportation brackets. Lifting of the Vermaport® must be done with the approved brackets provided by us. Any damage caused by lifting the unit without the appropriate bracketry will void any warranty on the product.

## Dimensions & Weights for Shipping

The table shows the lengths, heights and weights of the average unit for 1000mm increments of floor to floor travel for both Recessed ( R ) and Sill Support ( S ) units

H Floor to Floor mm	30° R			35° R			30° S			35° S		
	K mm	T mm	Weight kg	K mm	T mm	Weight kg	K mm	T mm	Weight kg	K mm	T mm	Weight kg
1000	5000	1600	1800	4500	1620	1680	6300	1730	2340	6500	1670	2280
1500	6000	1680	2100	5500	1700	1980	7200	1810	2640	6800	1770	2520
2000	7000	1750	2460	6500	1770	2220	8200	1900	2820	7100	1970	2760
2500	8000	1780	2700	7500	1800	2460	9200	1950	3240	7900	2010	3000
3000	9000	1800	3060	8500	1820	2820	10200	1990	3600	9600	2060	3360
3500	10000	1830	3300	9500	1850	3060	11200	2010	3900	10500	2090	3600
4000	11000	1850	3600	10500	1870	3300	12100	2030	4200	11400	2120	3840
4500	12000	1860	3960	11500	1880	3660	13000	2040	4560	12200	2130	4200
5000	13000	1880	4260	12500	1900	3900	14000	2060	4860	13100	2150	4440
5500	14000	1890	4560	13500	1910	4140	15000	2070	5100	14000	2160	4680
6000	15000	1900	4860	14500	1920	4380	16100	2080	5400	14800	2170	4920
6500	16000	1920	5160	15500	1940	4620	16900	2100	5700	15700	2190	5160
7000				16500	1960	4860				16600	2200	5400

Assume 3 piece weights & dimensions as 2 piece for estimation purposes.

Table 1 Vermaport® traffic flow analysis

Lift size		8	10	13	16	21
Floor area (sq.m)		1.66	2	2.4	2.9	3.56
Cart capacity (lsq.m/cart)		1	2	3	4	5
RTT journey time (secs)		60	65	65	70	75
Shoppers and carts moved per hour						
Number of lifts	1	60	111	111	154	192
	2	120	222	222	308	384
	3	180	333	333	462	576
	4	240	444	444	616	768
	5	300	555	555	770	960

Table 2 Vermaport® manufacturers throughout Europe and USA

Maker	Production	Factory No.	Basket capacity (ltr)	VPO	Drawing No.	Width
<b>Europe</b>						
Wanzl	Germany	ELT-7	102 oder 152	24	VPO.24.00.000.A3/00.II	1058
Wanzl	Germany	ELT-6	75 oder 90	29	VPO.29.00.000.A3/00.I	996
Wanzl	Germany	ELT-9F	185	50	VPO.50.00.000.A3/00.II	1152
Caddie	France	7.798.20.03	125	24	VPO.24.00.000.A3/00.V	1058
Caddie	France	7.798.01.03	100	24	VPO.24.00.000.A3/00.IV	1058
Siegel	Germany	EKW-130	130	24	VPO.24.00.000.A3/00.III	1058
Clarecart	England	1001	180	39	VPO.39.00.000.A3/00.I	1101
<b>USA</b>						
United Steel & Wire	USA	587-98	160	3	VPO.35.00.000.A3/00.II	1187
United Steel & Wire	USA	41-237-000	160	49	VPO.49.00.000.A3/00.I	1140
Rehrig	USA	2100-70	150	33	VPO.33.00.000.A3/00.I	1101
Rehrig	USA	Vista	190	58	VPO.58.00.000.A3/00.I	1185
Precision Wire	USA	PS-771	165	36	VPO.36.00.000.A3/00.I	1101
Technibilt	USA	3541	190	53	VPO.53.00.000.A3/00.I	1187
Tote	USA	1010	140	48	VPO.48.00.000.A3/00.I	1070

Table 3 Dimensions for heights and angles of installation

Floor to floor (mm)	30 R			35 R			30 S			35 S		
	K (mm)	T (mm)	Weight (kg)	K (mm)	T (mm)	Weight (kg)	K (mm)	T (mm)	Weight (kg)	K (mm)	T (mm)	Weight (kg)
1000	5000	1600	1800	4500	1620	1680	6300	1730	2340	6500	1670	2280
2000	7000	1750	2460	6500	1770	2220	8200	1900	2820	7100	1970	2760
3000	9000	1800	3060	8500	1820	2820	10200	1990	3600	9600	2060	8860
4000	11000	1850	3600	10500	1870	3300	12100	2030	4200	11400	2120	8840
5000	13000	1880	4260	12500	1900	3900	14000	2060	4860	13100	2150	4440
6000	15000	1900	4860	14500	1920	4380	16100	2080	5400	14800	21700	4920
7000	*	*	*	16500	1960	4860	*	*	*	16600	2200	5400

## Technical Data

Vermaport® Ltd is the World's leading shopping cart conveyor manufacturer and supplier, it is now part of the Morris Vermaport group of businesses. The company continues to strive to enhance and expand the design and capabilities of its products.

Morris Vermaport have been associated with the Vermaport® for almost 40 years, having manufactured one of the original units in the UK. In 2013 the Morris Vermaport Group acquired all rights to the design and trademarks for the Vermaport® Shopping Cart Conveyor as well as the RS Luggage Cart Return System and the LC Luggage Cart Conveyor.

The Group now has added strength in both its key markets of Lifts and Cart Conveyors, with The Directors having over 50 years of experience in design, service, maintenance and repair of the associated equipment. Which is why the opportunity to purchase the Vermaport® Brand and add it to our existing portfolio was important to our organisation.

## Our Product

The Vermaport® products are all bespoke units, individually designed to meet the clients cart and site requirements. They are manufactured to the highest of standards, to then meet the material finishes, specification and application requirements needs for its final installation. All units are fully assembled and tested before leaving the factory, to be shipped around the world.

Units can be manufactured for UP or Down applications, at a variety of angles from 25 to 35 Degrees and to be sited adjacent to Escalators or Stairs, with or without a "Pit". Units are shipped in an agreed number of pieces, to suit the needs of the site, from a single piece through to 3 pieces.

Vermaport® Units have now been installed in over 35 Countries throughout the World.

## Our Team

**Phillip Marsden**  
Managing Director

**Luke Turton**  
Operations Director

**Gavin Crossland**  
Projects Director

Vermaport® Units Are  
Sold Worldwide and  
Currently We Have Units  
in Over 35 Countries in  
Multiple Cities, in Excess  
of 450 Units Worldwide.

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**MV Lifts**