

**High throughput efficiency during complete filling or emptying of a pallet channel**

**Collision-free pallet storage and retrieval**

**Total system flexibility due to handling different pallet types**

**Optimum utilisation of building height through low racking compartment height**

**Operational with virtually any Jungheinrich stacker**



## Under Pallet Carrier UPC

### Compact Storage Shuttle System

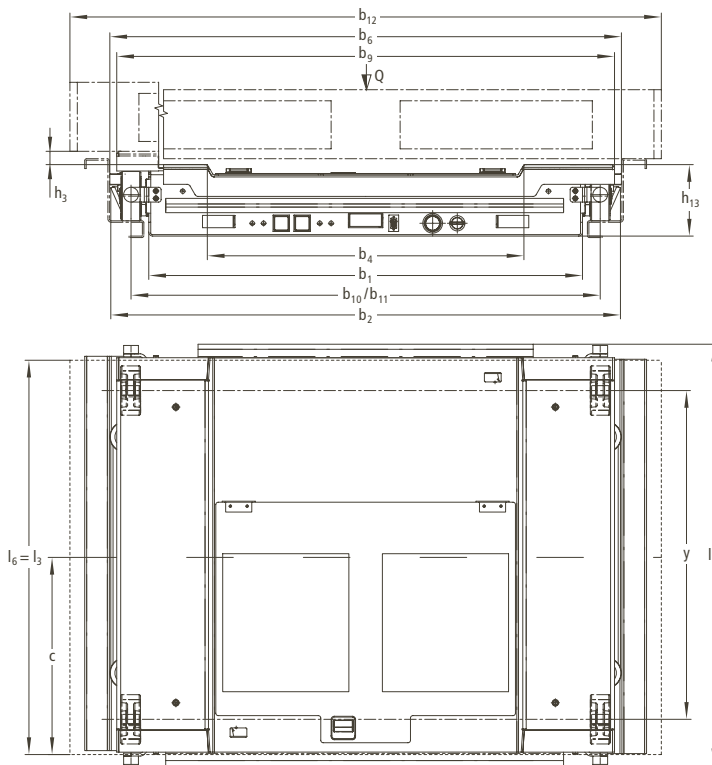
The Jungheinrich Compact Storage System with UPC (Under Pallet Carrier) – consisting of carrier, carrier truck and channel racking – facilitates optimum utilisation of storage space. UPC racking provides room in height and width for several pallet channels. The low height utilisation per channel level also allows effective use of the available storage height. Any Jungheinrich stacker with sufficient residual capacity can be used as carrier truck.

The UPC is particularly effective during repeated storage and retrieval in the same pallet channel – e.g. when buffering a large quantity of the same pallets. The UPC is put on the forks of the carrier truck and used in the pallet channel where it travels independently under the stored pallets without being connected to the carrier truck. After putting down the first pallet on the UPC rail in the racking channel and pressing the start button on the operating console, the process control carries out all necessary travel and lift move-

ments independently. Sensors recognise the position of stored pallets. Storage and retrieval of new pallets then takes place with no danger of collision.

Operating terminal and process control communicate via bi-directional radio link run on the registration-free ISM band (433 MHz). The operator picks up another pallet while the carrier is travelling, puts it down at the channel start and a new work cycle can begin. Retrieval is carried out accordingly.

# Under Pallet Carrier UPC



# Technical data in line with VDI 2198 as at: 07/2010

Identification	1.1	Manufacturer (abbreviation)	Jungheinrich	Jungheinrich	Jungheinrich	Jungheinrich	1.1	
	1.2	Manufacturer's type designation	<b>UPC P1</b>	<b>UPC P2</b>	<b>UPC P5</b>	<b>UPC P6</b>	1.2	
	1.3	Drive	electric	electric	electric	electric	1.3	
	1.4	Operator type	hand <sup>1)</sup>	hand <sup>1)</sup>	hand <sup>1)</sup>	hand <sup>1)</sup>	1.4	
	1.5	Load capacity/rated load	Q (t)	1.5	1.5	1.5	1.5	
	1.6	Load centre distance	c (mm)	400	500	500 <sup>2)</sup>	570	
	1.9	Wheelbase	y (mm)	667	845	845	984	
	Weights	2.1	Service weight incl. battery (see line 6.5)	kg	190	212	212	225
		2.2	Axle loading, laden front/rear	kg	845/845	856/856	856/856	863/863
2.3		Axle loading, unladen front/rear	kg	95/95	106/106	106/106	113/113	
Wheels, Chassis	3.1	Tyres	Polyurethan	Polyurethan	Polyurethan	Polyurethan	3.1	
	3.2	Tyre size, front	mm	∅100x40	∅100x40	∅100x40	∅100x40	
	3.3	Tyre size, rear	mm	∅100x40	∅100x40	∅100x40	∅100x40	
	3.5	Wheels, number front rear (x = driven wheels)		2x/2x	2x/2x	2x/2x	2x/2x	
	3.6	Track width, front	b <sub>10</sub> (mm)	952	952	952	842	
	3.7	Track width, rear	b <sub>11</sub> (mm)	952	952	952	842	
	Basic Dimensions	4.4	Lift	h <sub>3</sub> (mm)	27	27	27	27
4.15		Height, lowered	h <sub>13</sub> (mm)	150	150	150	150	
4.16		Length of loading surface	l <sub>3</sub> (mm)	800	1000	1000	1140	
4.18		Width of loading surface	b <sub>9</sub> (mm)	1010	1010	1010	900	
4.19		Overall length (without load)	l <sub>1</sub> (mm)	864	1064	1064	1204	
4.21		Overall width	b <sub>1</sub> /b <sub>2</sub> (mm)	880/1034	880/1034	880/1034	770/924	
4.26		Distance between wheel arms/loading surfaces	b <sub>4</sub> (mm)	651	651	651	468	
4.27		Width across guide rolls	b <sub>6</sub> (mm)	1038	1038	1038	928	
4.42		Pallet width	b <sub>12</sub> (mm)	1200	1200	1200	1140	
4.43		Pallet length	l <sub>6</sub> (mm)	800	1000	1000 <sup>3)</sup>	1140	
Performance Data	5.1	Travel speed, laden/unladen	km/h	3.4/3.8 <sup>3)</sup>	3.4/3.8 <sup>3)</sup>	3.4/3.8 <sup>3)</sup>	3.4/3.8 <sup>3)</sup>	
	5.2	Lift speed, laden/unladen	m/s	0.012/0.013	0.012/0.013	0.012/0.013	0.012/0.013	
	5.3	Lowering speed, laden/unladen	m/s	0.014/0.013	0.014/0.013	0.014/0.013	0.014/0.013	
E-Motor	6.1	Drive motor rating S <sub>2</sub> 60 min	kW	0.23	0.23	0.23	0.23	
	6.2	Lift motor rating at S <sub>3</sub> 15%	kW	2x0.15	2x0.15	2x0.15	2x0.15	
	6.4	Battery voltage, nominal capacity K <sub>s</sub>	V/Ah	2x12/58	2x12/58	2x12/58	2x12/58	
	6.5	Battery weight	kg	46	46	46	46	
	Others	8.1	Type of drive control		impulse	impulse	impulse	impulse
8.4		Sound level at the driver's ear according to EN 12 053	dB (A)	62	62	62	62	

- 1) Rail guided in pallet channel  
 2) Type P5 switchable, Euro pallet: c = 400 mm, l<sub>6</sub> = 800 mm  
 3) Travel speed with load with Q = 1000 kg

# Make use of the advantages



Start of storage



Storage



UPC returns to the beginning of the channel

## Flexibility through handling different pallet types

Different UPC variants facilitate the handling of different load carriers:

- Euro pallets.
- Industrial pallets.
- Euro and industrial pallets in the same racking system: Kombi carriers with sensors for recognising the pallet size.
- Chemistry pallets.
- Other variants are available on request.

## Special functionalities

- Stacking and retrieval according to LiFo (Last-in-First-out) and FiFo (First-in-First-out) is made easy.
- When channel is to be emptied completely, e.g. for a supply order, the UPC automatically takes each pallet in the channel to the retrieval side from where it is picked up by a stacker and taken to Goods-out.
- This function is also possible if not all but only a defined number of pallets are to be retrieved.
- Compressing: If there is no stacking or retrieval (e.g. at shift end), all pallets can automatically be brought to the retrieval side.

## Easy battery change for 2- and 3-shift operation

The battery charger of the carrier ensures easy charging at any 230 V mains socket. Dependent on the intensity of the application, the carrier with a fully charged battery set is operational for eight to ten hours. An additional second battery – in combination with a battery changing station (optional) – significantly increases the application time in 2- and 3-shift operations. Battery change is carried out in seconds due to the battery container.



Easy battery change

## UPC Compact Storage System in cold store

Excellent space utilisation is of particular importance for the efficient operation in a cold store. UPC in cold store design (optional) allows application in temperatures up to  $-30^{\circ}\text{C}$ . A second battery set with charging station noticeably increases operational availability.

## User-friendly hand-held radio terminal

- Ergonomic mounting within the operator's field of vision.
- Simple operation and clear information display.
- Well-arranged function keys.
- Numerous diagnostic functions for Jungheinrich Service.
- Mobile use is also possible.

## Larger racking installations with several carriers

Up to 69 different carriers can be dialled up with a hand-held radio terminal for larger racking installations. The operator only needs to change the identification on the hand-held terminal to contact the next carrier.

## Jungheinrich UK Ltd.

Head Office:

Sherbourne House · Sherbourne Drive  
Tilbrook · Milton Keynes MK7 8HX  
Phone 01908 363100  
Fax 01908 363180

info@jungheinrich.co.uk  
www.jungheinrich.co.uk



**JUNGHEINRICH**  
Well worthwhile