

**High throughput efficiency
with frequent channel change**

**Collision-free pallet stacking
and retrieval**

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

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

**Operational with virtually any
Jungheinrich stacker**



In Pallet Carrier IPC

Compact Storage Shuttle System

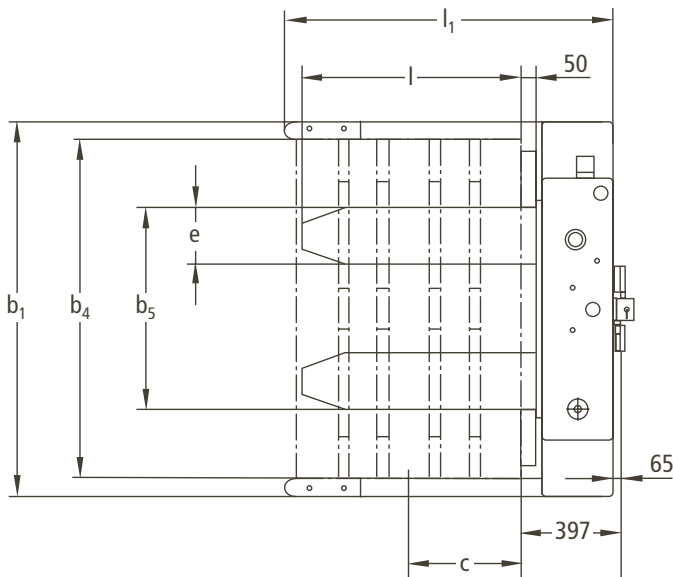
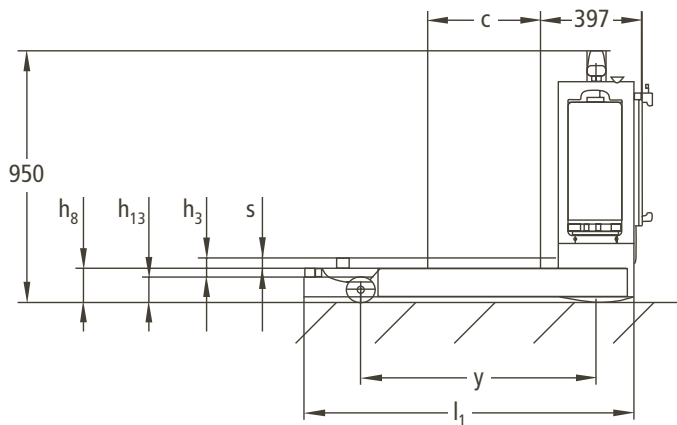
The Jungheinrich Compact Storage Shuttle System with IPC (In Pallet Carrier) – consisting of carrier, carrier truck and channel racking – facilitates consistent utilisation of storage space. IPC racking provides room in height and width for several pallet channels. The low height utilisation per channel level and the low first level also allow effective use of the available storage height. Any Jungheinrich stacker with FEM fork carriage, sufficient residual capacity and sideshift can be used as carrier truck.

The IPC is particularly effective when frequent changes of channels take place, such as required for making different articles available for runs in distribution warehouses. The IPC is connected to the carrier truck with a special coupling and picks up pallets with its forks. It travels independently in the pallet channel without being connected to the carrier truck. When used in the channel – with or without load – the active locking of carrier to stacker is deactivated. After pressing the start button on the operating console, the process control carries out all travel and lift move-

ments independently. Sensors recognise the position of stored pallets. There is therefore no danger of collision when stacking and retrieving new pallets.

Operating terminal and process control communicate via bi-directional radio link run on the registration-free ISM band (433 MHz). After returning to the channel start, the carrier is again picked up by the stacker and the locking is activated ready for a new work cycle. The effective monitoring of coupling to stacker ensures maximum safety.

In Pallet Carrier IPC



Technical data in line with VDI 2198 as at: 06/2010

Identification	1.1	Manufacturer (abbreviation)	Jungheinrich	Jungheinrich	Jungheinrich	Jungheinrich	Jungheinrich	1.1		
	1.2	Manufacturer's type designation	IPC P1	IPC P2	IPC P3	IPC P4	IPC P5	1.2		
	1.3	Drive	electric	electric	electric	electric	electric	1.3		
	1.4	Operator type	hand ¹⁾	hand ¹⁾	hand ¹⁾	hand ¹⁾	hand ¹⁾	1.4		
	1.5	Load capacity/rated load	Q (t)	1.2	1.2	1.2	1.2	1.2 ²⁾	1.5	
	1.6	Load centre distance	c (mm)	400	500	600	600	500 ²⁾	1.6	
	1.9	Wheelbase	y (mm)	826	1026	1226	1226	1026	1.9	
	Weights	2.1	Service weight incl. battery (see line 6.5)	kg	440	440	440	440	440	2.1
		2.2	Axle loading, laden front/rear	kg	940/700	940/700	940/700	940/700	940/700	2.2
2.3		Axle loading, unladen front/rear	kg	110/330	110/330	110/330	110/330	110/330	2.3	
Wheels, Chassis	3.1	Tyres	polyurethane	polyurethane	polyurethane	polyurethane	polyurethane	3.1		
	3.2	Tyre size, front	mm	∅100x45	∅100x45	∅100x45	∅100x45	∅100x45	3.2	
	3.3	Tyre size, rear	mm	∅180x40	∅180x40	∅180x40	∅180x40	∅180x40	3.3	
	3.5	Wheels, number front rear (x = driven wheels)		2/2x	2/2x	2/2x	2/2x	2/2x	3.5	
	3.6	Track width, front	b ₁₀ (mm)	1274	1274	874	1074	1274	3.6	
	3.7	Track width, rear	b ₁₁ (mm)	1154	1154	754	954	1154	3.7	
	Basic Dimensions	4.4	Lift (standard mast)	h ₃ (mm)	80	80	80	80	80	4.1
4.10		Height of wheel arms	h ₈ (mm)	122	122	122	122	122	4.10	
4.15		Height, lowered	h ₁₃ (mm)	100	100	80	80	100	4.15	
4.19		Overall length	l ₁ (mm)	1177	1377	1577	1577	1377	4.19	
4.21		Overall width	b ₁ /b ₂ (mm)	1340/-	1340/-	940/-	1140/-	1340/-	4.21	
4.22		Fork dimensions	s/e/l (mm)	50/160/780	50/160/980	50/160/1180	50/160/1180	50/160/980	4.22	
4.25		Width across forks	b ₅ (mm)	720	720	570	570	720	4.25	
4.26		Distance between wheel arms/loading surfaces	b ₄ (mm)	1220	1220	820	1020	1220	4.26	
4.32		Ground clearance, centre of wheelbase	m ₂ (mm)	22	22	22	22	22	4.32	
4.42		Pallet width	b ₁₂ (mm)	1200	1200	800	1000	1200	4.42	
4.43		Pallet length	l ₆ (mm)	800	1000	1200	1200	1000 ²⁾	4.43	
Performance Data	5.1	Travel speed, laden/unladen	km/h	1.8	1.8	1.8	1.8	1.8	5.1	
	5.2	Lift speed, laden/unladen	m/s	0.01/0.02	0.01/0.02	0.01/0.02	0.01/0.02	0.01/0.02	5.2	
	5.3	Lowering speed, laden/unladen	m/s	0.04/0.02	0.04/0.02	0.04/0.02	0.04/0.02	0.04/0.02	5.3	
E-Motor	6.1	Drive motor rating S ₂ 60 min	kW	0.37	0.37	0.37	0.37	0.37	6.1	
	6.2	Lift motor rating at S ₃ 15%	kW	0.4	0.4	0.4	0.4	0.4	6.2	
	6.4	Battery voltage, nominal capacity K _s	V/Ah	2x 12/60	2x 12/60	2x 12/60	2x 12/60	2x 12/60	6.4	
	6.5	Battery weight	kg	58	58	58	58	58	6.5	
	Others	8.1	Type of drive control		impulse	impulse	impulse	impulse	impulse	8.1
8.4		Sound level at the driver's ear according to EN 12053	dB(A)	66	66	66	66	66	8.4	

1) Rail guided in pallet channel

2) Type P5 switchable, Euro pallet (on fork tips): Q = 1,0 t; c = 600 mm; l₆ = 800 mm

Make use of the advantages

Flexibility through handling different pallet types

Different IPC variants facilitate the handling of different load carriers:

- Euro pallets crosswise.
- Euro pallets lengthwise.
- Industrial pallets crosswise.
- Industrial pallets lengthwise.
- With movable pallet stop for up to three different pallet sizes in the same racking system.
- Two half pallets next to each other in the same channel with an IPC with four forks and a central rail for the racking channel.
- The central rail can also be used for pallets with large deflection or for lengthwise pallet storage.
- Further variants are available on request.

Special functionalities

Storage and retrieval according to LiFo (Last-in-First-out) and FiFo (First-in-First-out) is made easy. The In Pallet Carrier is simply moved to the other end of the channel for the FiFo method.

IPC Compact Storage System in cold store

Excellent space utilisation is of particular importance in a cold store. The IPC Compact Storage System in cold store design (optional) allows application in temperatures up to -30°C . A second battery with battery changing trolley 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.



Hand-held radio terminal with docking station

- Numerous diagnostic functions for Jungheinrich Service.
- Mobile use is also possible.

Easy battery change for 2- and 3-shift operation

The IPC battery charger ensures easy charging at any 230 V mains socket. Dependent on the application intensity, the load carriage with fully charged battery is operational for eight to ten hours. An additional second battery – in combination with a battery changing trolley (optional) – significantly increases the application time in 2- and 3-shift operations. Battery change



Battery change with battery changing trolley

is carried out in seconds due to the battery container. The container on rollers is pushed sideways into the carrier and contact is made automatically. In continuous operation, the integrated charger on the battery changing trolley is charging the respective discharged battery in the meantime.

Replacement forks for extended application

Any pallet racking can be served during interim periods by fitting replacement forks (optional) to the stacker coupling. The carrier can stay in the racking channel during the intervening time. The change-over is done in seconds – without time-consuming installation on the fork carriage.



Replacement forks 1180 mm long

Larger racking installations with several carriers

Up to twelve 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.

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