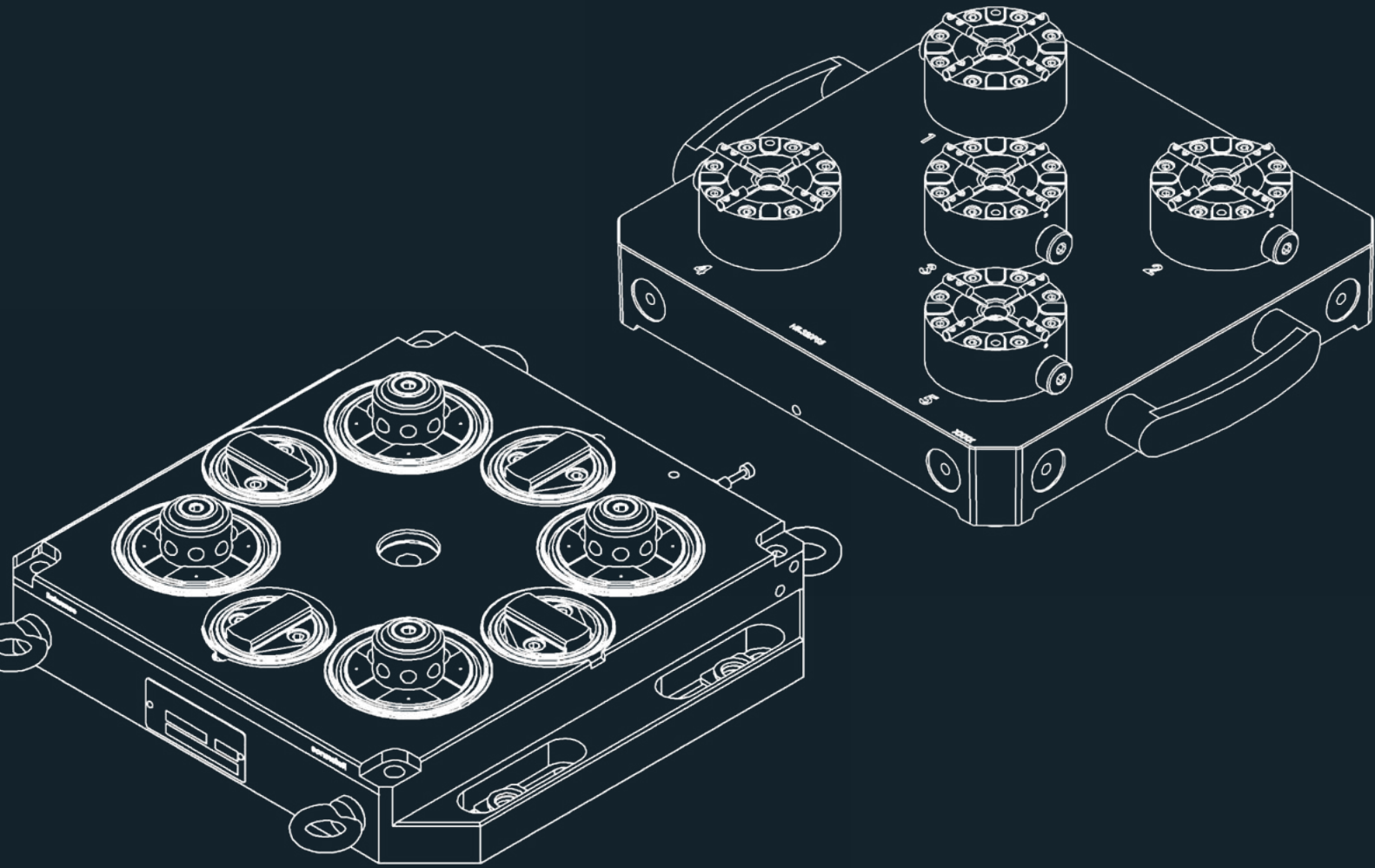


the **precision** benchmark



# Clamping System 8000

For machine tools

**CARL  
HIRSCH  
MANN** 

# Carl Hirschmann GmbH

## **Precision as passion**

Highest precision is the distinctive trademark of our clamping systems. With great passion and deep special know how we develop and manufacture trend-setting products for your ambitious requirements – since decades and with increasing enthusiasm. As leading manufacturer in clamping technology for EDM, milling, turning and measuring machines as well as for machining centers we convince with competence in solutions and innovative conceptual results. We are the system provider with perfected engineering for clamping projects.

## **Carl Hirschmann – the precision benchmark**

The application range of our Clamping System 8000 are machine tools, milling and drilling machines, surface grinding machines as well as sinking EDM for fixture and workpiece palletizing. Already our standard assortment covers a wide range. For your specific requirements we design and produce individual configurated palletizing and clamping systems up to assembling in the metal-cutting machine. The tight cooperation with the customer guarantees perfect results even for complex challenges.

Take benefit of our full service out of one source. Our Clamping System 8000 offers you unbeatable advantages on global market.



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## Operation

Most tools are supplied together with an operating guide. Correct operation cannot be ensured and danger to personnel and machine cannot be excluded unless these operating instructions or information given in this catalogue are observed.

## Precision

The individual tool planes incorporate hardened and precision ground X and Y centering prisms and separate Z-supports. This assures position centering of each tool with a repetitive accuracy (consistency) of  $\leq 0.002$  mm (0.00008").

## Service and maintenance

Since the Clamping System is subject to chemical and physical influences, maintenance and service has to be performed with special care.

## Technical modification

All products shown in this catalogue are subject to ongoing improvements and developments; we reserve the right to make modifications without notice.

## Quality According to ISO 9001 and EN 9100

All products of Carl Hirschmann GmbH are manufactured using the latest production methods. All products are submitted for ISO 9001 and EN 9100 (air and space industry standard) quality assurance.

## Warranty

We provide a 12 month warranty for all Clamping System parts starting from the invoice date, and assuming correct use and maintenance as specified has been observed.

The warranty is restricted to replacement or repair, free of charge, of any defective parts. Claims arising from improper use or handling shall not be considered. Warranty claims must be submitted in writing.

# Clamping System 8000

## Application

The Clamping System 8000 is used on milling and drilling machines, surface and jig milling machines and sinking EDM for fixture and workpiece palletizing. The pallets can be changed manually or automatically with workpiece changers and robot systems.

The compatibility with Clamping System 4000 for wire EDM and Clamping System 5000 for sinking EDM is guaranteed with the Pallet Clamper H8.11.32M with central clamper.

## Economic Efficiency

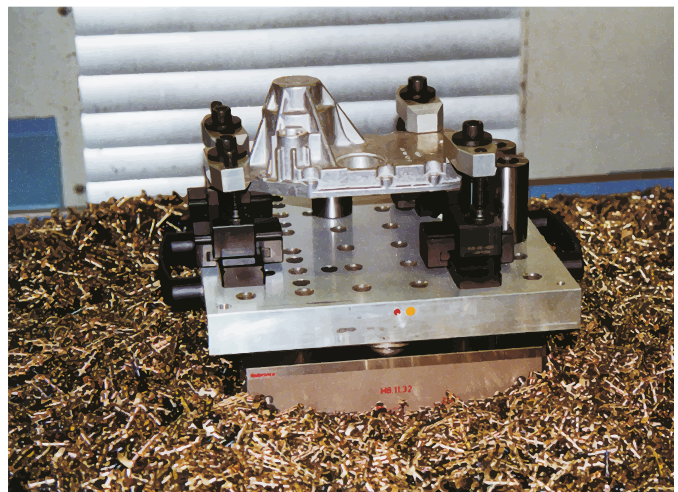
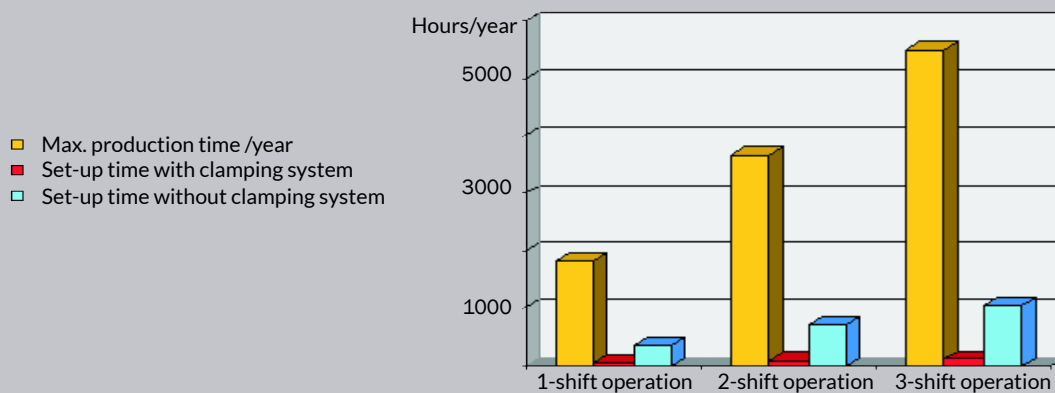
Machine tools are profitable only when they are working, not when they are blocked by unnecessary long set-up periods.

The use of a clamping system for set-up of tools parallel to production allows a pallet change within seconds. This results in an enormous increase of machine tool productivity.

Without a clamping system an average change of workpieces takes approx. 18 – 20 minutes, with a clamping system max. 2 minutes. The result is a set-up time reduction of approx. 90 %.

One change of fixture per day projected to 220 working days/year gives a set-up time reduction of approx. 58 hours. This is, at a hourly rate of 70 EUR, a benefit of approx. 4.000,- EUR. For several changes or more shift operation the benefit is analogical multiplied.

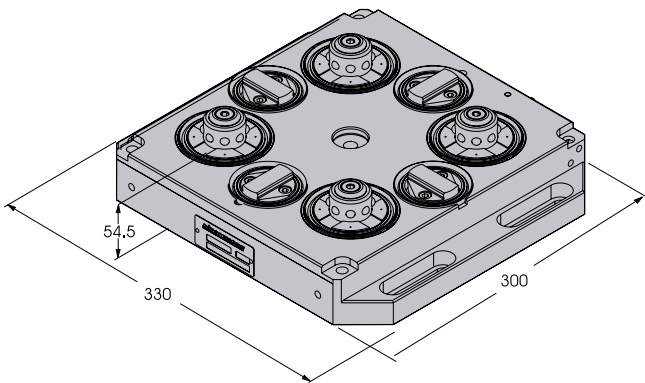
The consequent use of a clamping system enables to survive in a more and more aggressive competition.



# Pneumatic pallet clamber

## Characteristics

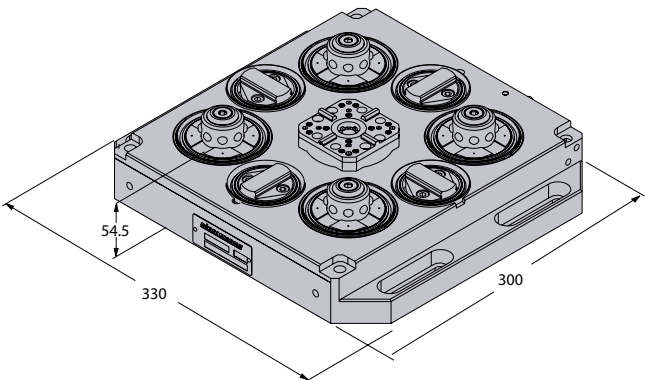
- Solid centering and clamping elements guarantee precise fixation and highest repetitive accuracy
- Due to the ground reference face it is not necessary to use an aligning pallet
- Centering and clamping elements are protected with seals against coolant and chips
- Clamping by spring pressure with additional pneumatic retention by 4 clamping cylinders



### H8.11.32 Pneumatic Pallet Clamber

Positioning and repetitive accuracy	0.002 mm (0.00008")
Indexing accuracy 4x90°	0.01 mm (0.0004")
Clamping force (with pneum. retention)	60000 N
Clamping force (without pneum. retention)	20000 N
Max. perm. workpiece weight	300 kg (660 lbs)
Weight approx.	34 kg (75 lbs)
Compressed air	6 - 8 bars

3 m pneumatic hoses are included in the delivery.



### H8.11.32M6 Combined Pallet Clamber

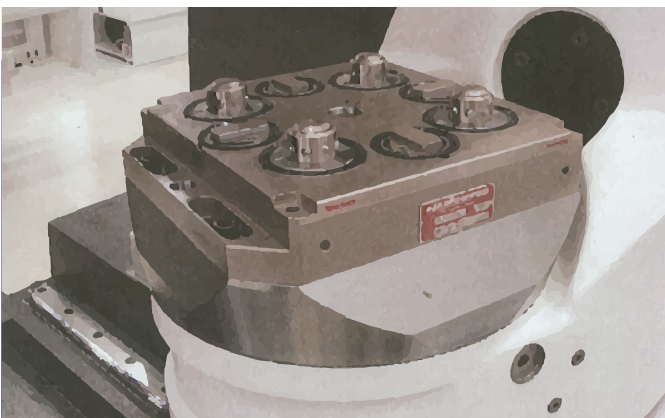
With centrally located pneumatic clamber H 6.11.10.1 for the holders and pallets of the Clamping System 5000 with clamping journal H 6.611 (not for pallet H8.180 and the MINIFIXplus electrodes).

Positioning and repetitive accuracy	0.002 mm (0.00008")
Clamping force (with pneum. retention)	60000 N
Clamping force (without pneum. retention)	20000 N
Clamping force of the center clamber	2500 N
Max. perm. workpiece weight	300/50 kg (660/110 lbs)
Weight approx.	35 kg (78 lbs)
Compressed air	6 bars

3 m pneumatic hose 6x1mm included to delivery.

### H8.11.32M Combined Pallet Clamber

Same as H 8.11.32M6 with centrally located pneumatic clamber H 8.11.20 for the holders and pallets of the Clamping System 5000 with clamping journal H 5.611 and for the MINIFIXplus electrodes (not for pallet H8.180).



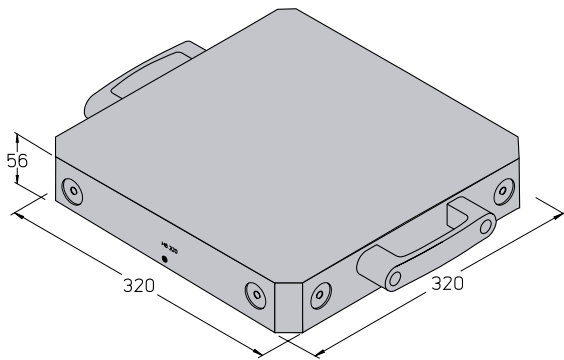
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# Clamping System 8000

## Pallets

### Common features

- Four centering and clamping elements of hardened steel and far apart from each other
- Covered and hardened x-y-z reference elements
- Manual and automatic change



### H8.320 Pallet

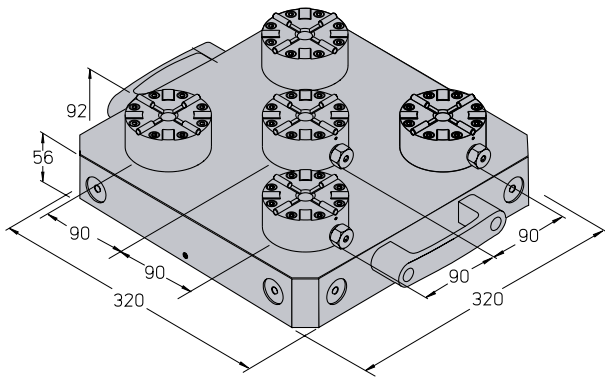
Aluminium pallet, ground, without clamping bores.

Flatness < 0.01 mm (0.0004")

Parallelism < 0.01 mm (0.0004")

Dimensions 320x320x56 mm (12.6x12.6x2.2")

Weight approx. 12 kg (27 lbs)



### H8.320PS5 Pallet with Clampers H8.16

Aluminium pallet with five manual Pallet Clampers for mounting of all holders and pallets of the Fixturing System 5000 for Sinking EDM with clamping journal H5.611..

Flatness < 0.01 mm (0.0004")

Parallelism < 0.01 mm (0.0004")

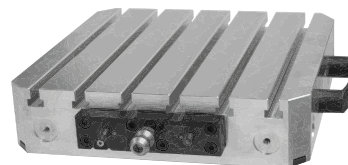
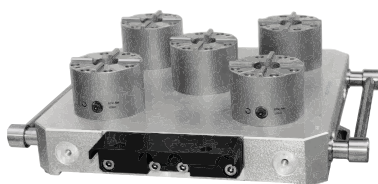
Dimensions 320x320x92 mm (12.6x12.60x3.62")

Weight approx. 18 kg (40 lbs)

### H8.320PS5.6 Pallet with Clampers H6.16

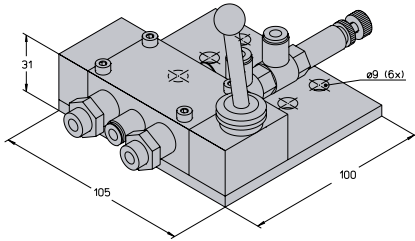
Same as H8.320PS5 but with clampers for pallets and holders with clamping journal H6.611.

Pallets with thread bores and T-groove are also available on request.



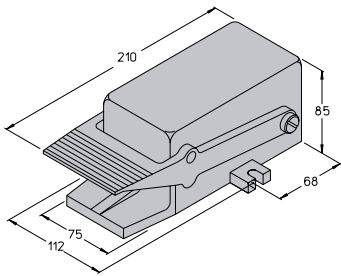
The pallets H8.320.. can for automatic changing be equipped with different gripper systems.

# Accessories



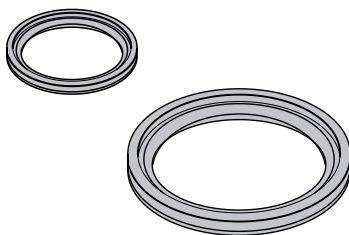
## H4101 Pneumatic control unit

Manual control unit for activating (opening, cleaning, clamping) the pneumatic clampers.  
Working pressure max. 10 bars



## H8.32.12 Foot Switch

For opening or closing the pneumatic pallet clampers manually (3 m plastic hose 6x1mm included).



## H8.32.34 Small Seal

Spare part for Pallet Clampers H.8.11.32...

## H8.32.35 Large Seal

Spare part for Pallet Clampers H.8.11.32.

# Our Clamping Systems

## Overview

Clamping System	4000	5000	8000	9000	μ-Prifix
Use for	Workpiece clamping and palletizing for wire EDM	Electrode / workpiece clamping and palletizing	Workpiece and fixture palletizing	Workpiece and fixture palletizing	Micro clamping system for high precision part manufacturing
Wire EDM	x				x
Sinking EDM		x	x	x	x
Micro manufacturing		x			x
Chipping		x	x	x	x
Laser machines		x	x	x	x
Mounting		x	x	x	x
Measurement technique		x	x		x
Repetitive accuracy	≤ 0.002 mm ≤ 0.00008"	≤ 0.002 mm ≤ 0.00008"	≤ 0.002 mm ≤ 0.00008"	≤ 0.005 mm ≤ 0.0002"	≤ 0.0001mm ≤ 0.000004"
Max. workpiece weight	150 kg	100 kg	300 kg	1000 kg / chuck	
Clamping force	---	18.000 N	60.000 N	10.000 N / chuck pneumatic 26.000 N / chuck hydraulic	500 N
Automatic changable with handling units	x	x	x	x	x

Detailed information can be found in the respective catalogs and on the internet: [www.carlhirschmann.de](http://www.carlhirschmann.de)  
If you have any questions or for a detailed/ comprehensive advice/ consultation, please do not hesitate to contact our sales staff.

Download area:



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