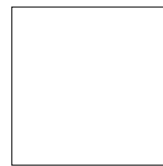
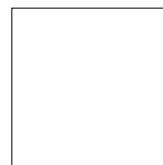


Palletizing System 8000

Integrated workpiece management for manufacturing



Reg. No. 3402



ИОНЕКС

Catalogue PE 3801

Тольятти: (8482) 25-82-40, (8482) 25-82-85, (927) 775-49-65, (906) 128-12-68, tlt@ionexedm.ru
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www.ionexedm.ru

Clamping Force 60000 N
Repetitive Accuracy 0.002 mm (0.00008")
Solid, Compact, Economical



HIRSCHMANN



Integrated Manufacturing

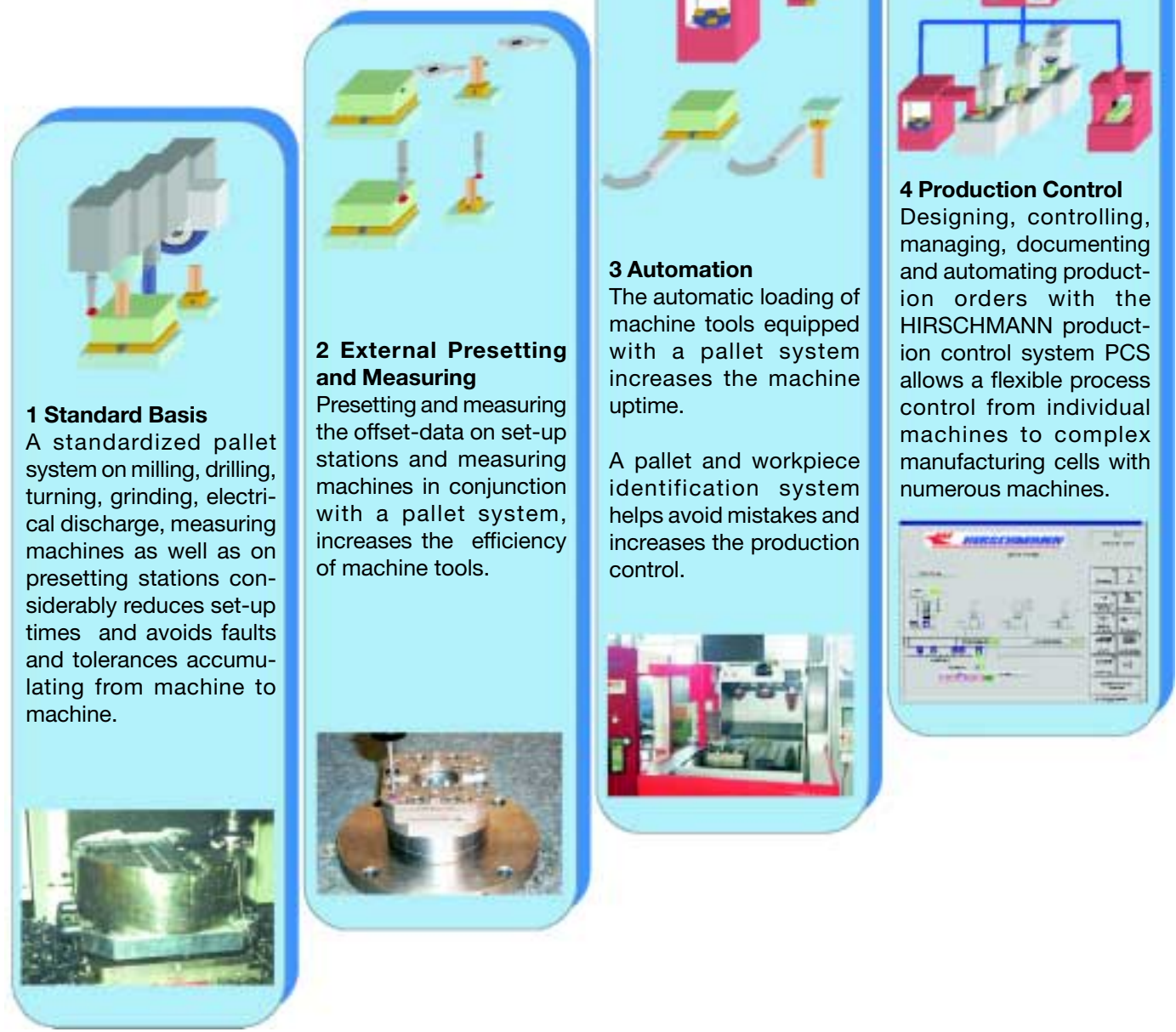
Enormous order pressure often is the reason that there is little time devoted to investigate the unused potential in manufacturing. When time is taken to analyze and investigate better ways to handle workpiece through-put, manufacturing costs can be substantially reduced. The integrated pallet systems described in this catalogue, offer a simple solution to an age old problem.

HIRSCHMANN offers the necessary components:

- **Compatibility of fixturing and palletizing systems**
- **Presetting and set-up stations, measuring machines**
- **Handling devices, identification systems, rotary dividing tables etc.**
- **Production control system (management system)**

All these components do not have to be applied at once but can be introduced **step by step** which makes the investment easier to amortize.

Steps to Automation



1 Standard Basis

A standardized pallet system on milling, drilling, turning, grinding, electrical discharge, measuring machines as well as on presetting stations considerably reduces set-up times and avoids faults and tolerances accumulating from machine to machine.

2 External Presetting and Measuring

Presetting and measuring the offset-data on set-up stations and measuring machines in conjunction with a pallet system, increases the efficiency of machine tools.

3 Automation

The automatic loading of machine tools equipped with a pallet system increases the machine uptime.

A pallet and workpiece identification system helps avoid mistakes and increases the production control.

4 Production Control

Designing, controlling, managing, documenting and automating production orders with the HIRSCHMANN production control system PCS allows a flexible process control from individual machines to complex manufacturing cells with numerous machines.



Palletizing System 8000 - The Basis

This comprehensive fixturing system is the base for fast, economical and precise manufacturing. As reference system on milling and drilling machines, surface and jig milling machines and sinking EDMs the Palletizing System 8000 is used for fixture and workpiece palletizing. Accuracy, efficiency and reduction of the set-up time are the main reasons for using this palletizing system. The pallets can be changed manually or automatically with the Workpiece Changer EROBOT to allow an economic manufacturing.

The Palletizing System 8000 is compatible with the Fixturing System 4000 for wire EDMs and with the Fixturing System 5000 for sinking EDMs.

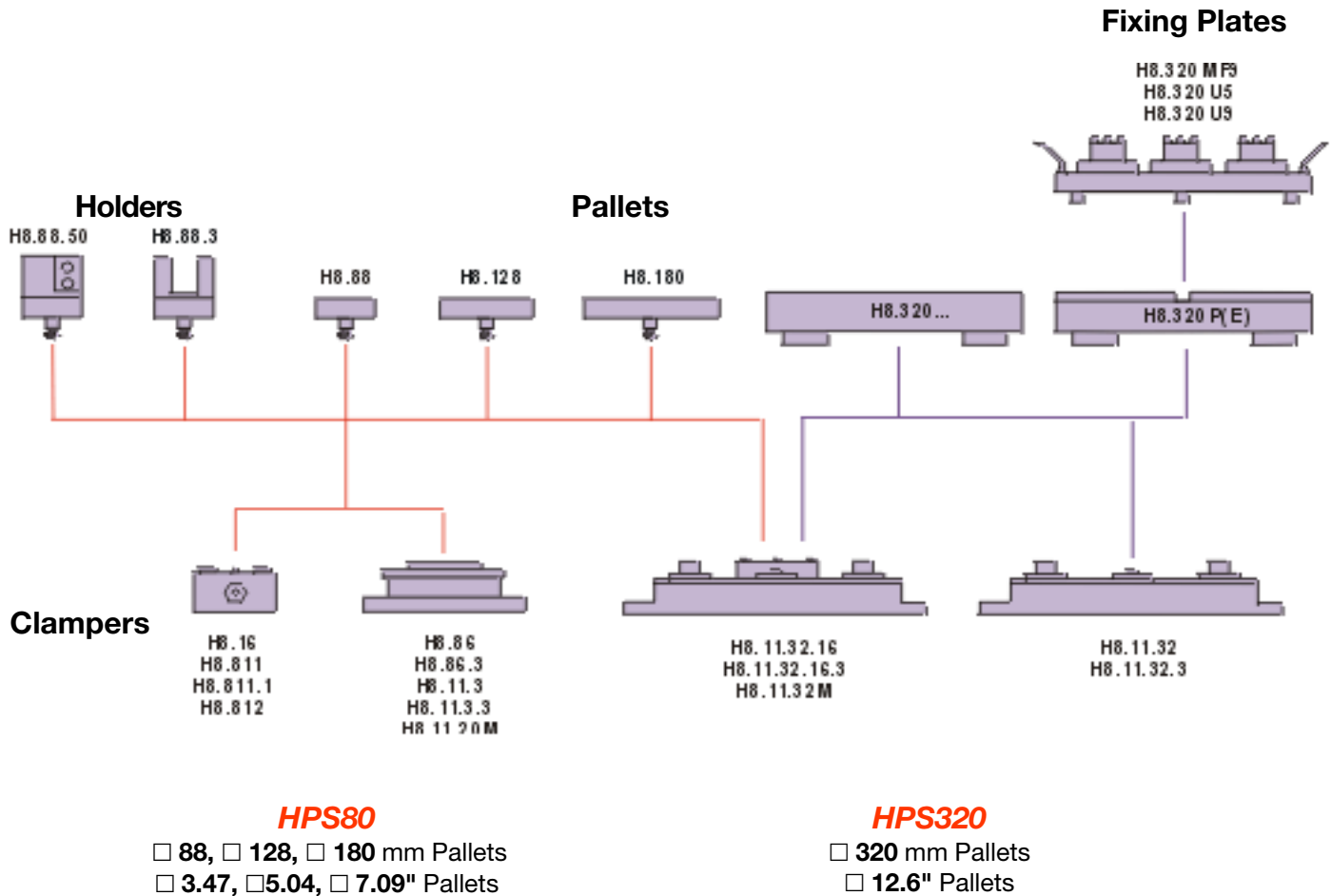


Characteristics:

- Positioning and repetitive accuracy 0.002 mm (0.00008")
- For weights up to 300 kg (661 lbs)
- Integrated x-y-z-references
- One piece and therefore not susceptible to shocks
- Solid, compact, economical
- Manual and automatic workpiece change with the Workpiece Changer EROBOT
- Compatible with the Fixturing Systems 4000 and 5000 for Wire and Sinking EDMs.



Palletizing System 8000 - Overview



Warranty

We provide a 12-months warranty for all fixturing system parts produced by us, starting from the invoice date, and assuming correct use and maintenance as specified. The warranty is restricted to replacement or repair, free of charge, of any defective parts. Claims going beyond that shall not be considered.

Warranty claims shall be submitted without delay and in writing.

Quality According to DIN EN ISO 9001

All HIRSCHMANN GMBH products are produced using the latest production methods, and are subject to quality assurance measures as per DIN EN ISO 9001 both during production and in the product stage.

Precision

The individual tool planes incorporate hardened (except the Pallets H8.88A, H8.128A) and precision ground centering Vee blocks and separate Z-supports. This assures position centering of the pallets and holders. When the reference points are in alignment, a repetitive accuracy (consistency) of 0.002 mm (0.00008") is achieved, measured 100 mm (3.937") below the tool plane.

Technical Modifications

As all products shown in this catalogue are subject to continuous further developments, we reserve the right for technical modifications.



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HIRSCHMANN GMBH



Economic Efficiency

Fixturing and palletizing systems are important components for reducing the set-up time. The set-up process has to take place parallel to the production time. Meaning that the tools and workpieces are prepared outside. Therefore, the production on the machine is only interrupted for workpiece or tool change.

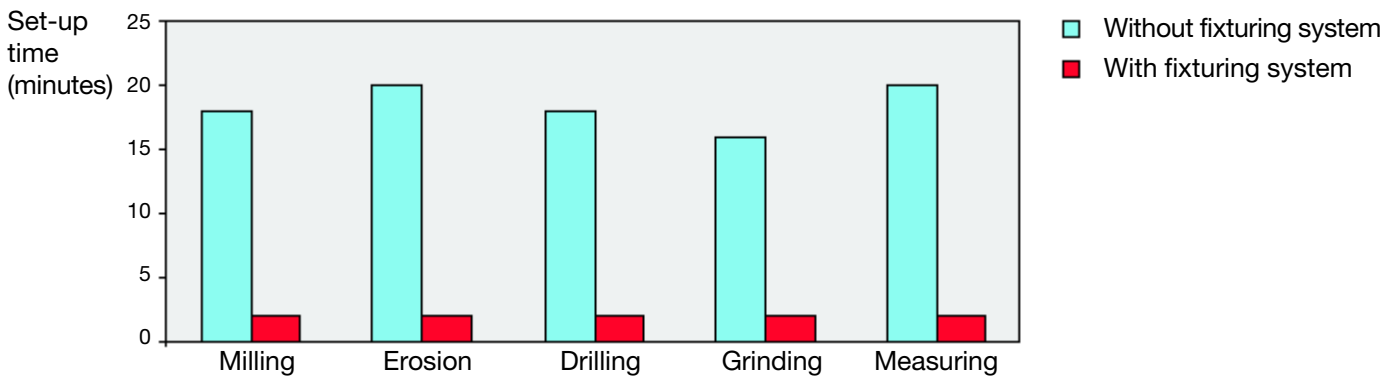
Advantages of a Palletizing System:

- Workpiece and fixture set-up parallel to the production time
- Quicker and more precise workpiece and fixture change from machine to machine
- Increase of the productivity by increase of the machine uptime
- Less expensive rationalization measure

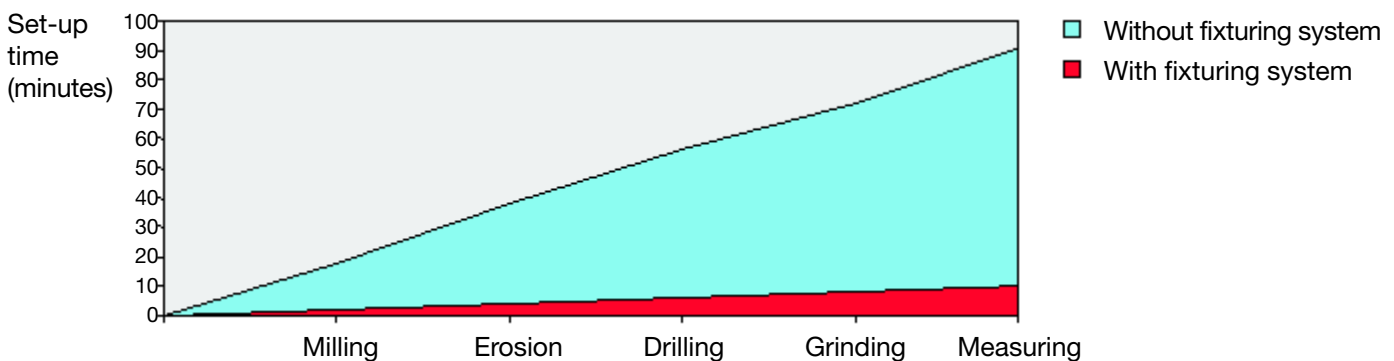
Comparison of the Set-Up Times (with and without fixturing and palletizing system)

		Without fixturing system (minutes)	With fixturing system (minutes)
Milling		18	2
Eroding		20	2
Drilling		18	2
Grinding		16	2
Measuring		20	2
	Total	92	10
	Average	18,4	2

Comparison of the set-up times for single machines



Comparison of the set-up times: Accumulated



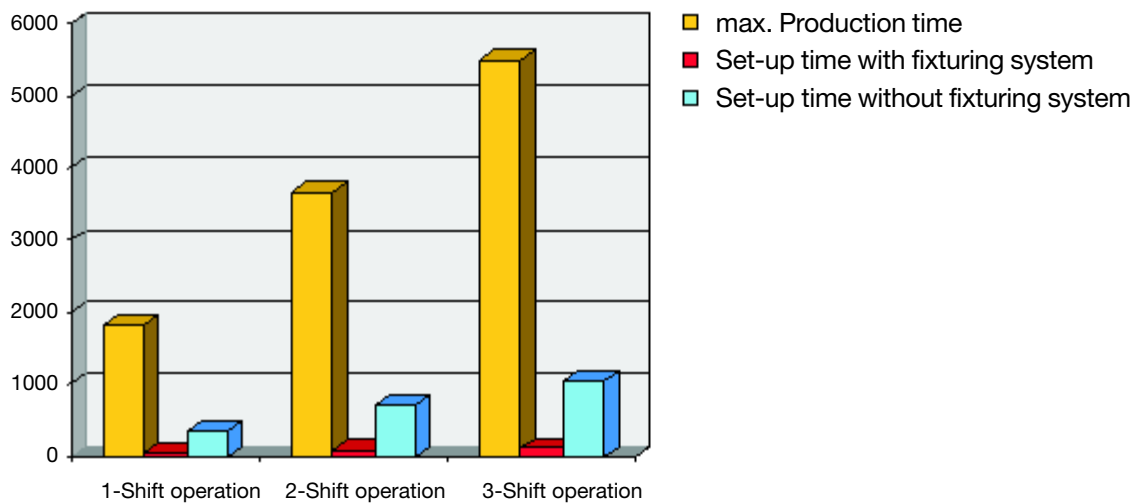


Reduction of the Set-Up Times by Compatibility

A compatibility of the machine tools is necessary to allow the cost-lowering effect of reduced set-up times to come up. An economical and effective production in a competition that becomes harder is only possible with the consequent usage of fixturing and palletizing systems.

	1-Shift operation	2-Shift operation	3-Shift operation
max. Production time / year	1832 h	3664 h	5496 h
Set-up time / year without fixturing System	350 h	700 h	1050 h
Set-up time / year with fixturing System	38 h	76 h	114 h

(Based on a production with five machine tools and one fixture change in one shift!)



Calculation of the Economical Effect (example with palletizing system on a machine tool)

1.) Economies in relation to the set-up time

	1-Shift operation	2-Shift operation	3-Shift operation
1x Fixture change	16,4 min (0,27 h)	32,8 min (0,55 h)	49,2 min (0,82 h)
3x Fixture change	49,2 min (0,82 h)	98,4 min (1,64 h)	147,6 min (2,46 h)
5x Fixture change	82,0 min (1,37 h)	164,0 min (2,73 h)	246,0 min (4,10 h)

2.) Economies in percentage

	Economies
1 x Fixture change	3,4 %
3 x Fixture change	10,3 %
5 x Fixture change	17,1 %

3.) Amortization

	1-Shift operation	2-Shift operation	3-Shift operation
1 x Fixture change	2,7 years	1,4 years	0,9 years
3 x Fixture change	0,9 years	0,5 years	0,3 years
5 x Fixture change	0,6 years	0,3 years	0,2 years



Palletizing System 8000HPS320 (320x320 mm (12.60"x12.60") Pallets)

The **HPS320** is used as reference system on milling and drilling machines, surface and jig milling machines and sinking EDMs for fixture and workpiece palletizing. The pallets can be changed manually or automatically with the HIRSCHMANN Workpiece Changer EROBOT.

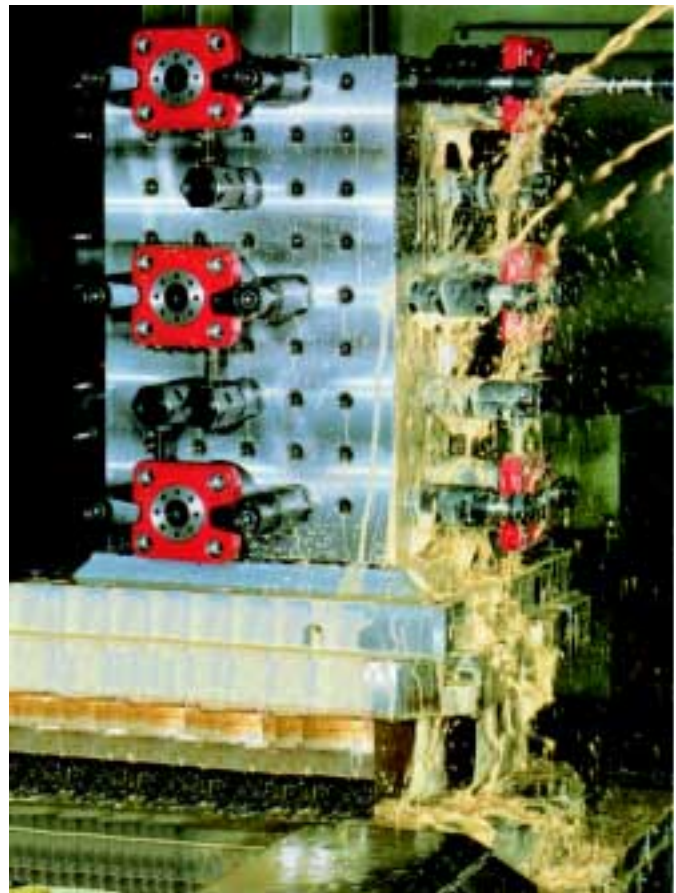
The compatibility with the Fixturing System 4000 for wire EDMs and the Fixturing System 5000 for sinking EDMs is guaranteed with the Pallet Clamper H8.11.32.16 with its central Clamper H8.16.

Characteristics:

- **Highly precise, positive clamping**
- **Integrated x-y-z-references**
- **Reference elements of hardened steel**
- **Manual and automatic change**
- **Solid, compact, economical**

Technical data:

Pallet sizes (lxw)	320x320 mm (12.60"x12.60")
Repetitive accuracy	0.002 mm (0.00008")
Indexing accuracy (4x90°)	0.01 mm (0.0004")
Loading weight up to	300 kg (661 lbs)
Clamping force	60000 N

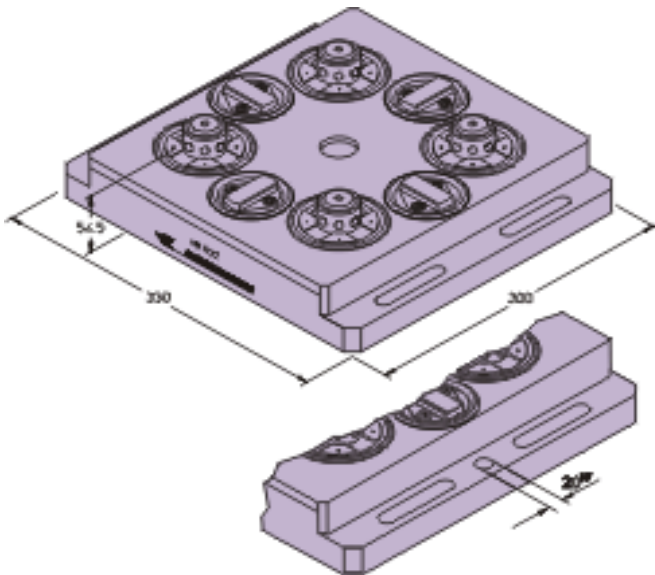




Pneumatic Pallet Clampers

for the precise fixing of Pallets H8.320...

- Solid centering and clamping elements ensure a precise fixing and highest repetitive accuracy
- Alignment pallets are superfluous because of the ground alignment surface and center bores.
- Seals protect the centering and clamping elements against coolant and chips
- Clamping by spring pressure with additional pneumatic assistance through four clamping cylinders

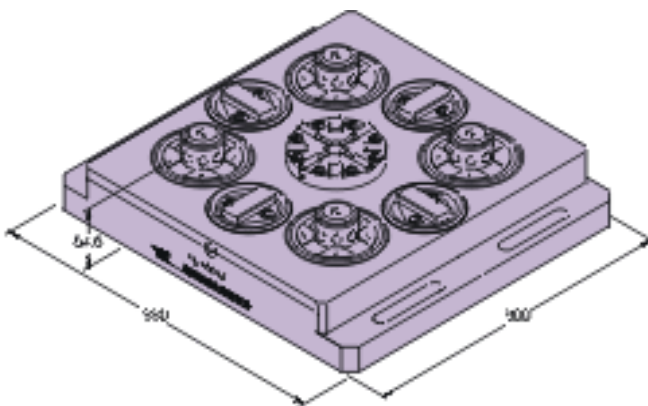


H 8.11.32 Pneumatic Pallet Clamper

Positioning and repetitive accuracy 0.002 mm (0.00008")
 Indexing accuracy 4x90° 0.01 mm (0.0004")
 Clamping force (additional pneum. assistance) 60000 N
 Max. perm. workpiece weight 300 kg (661 lbs)
 Weight approx. 34 kg (75 lbs)
 Compressed-air 6 - 8 bars
 3x3m pneumatic hoses are included in the delivery.

H 8.11.32.3 Pneumatic Pallet Clamper

H8.11.32 with two positioning bores \varnothing 20H7 in the base plate.



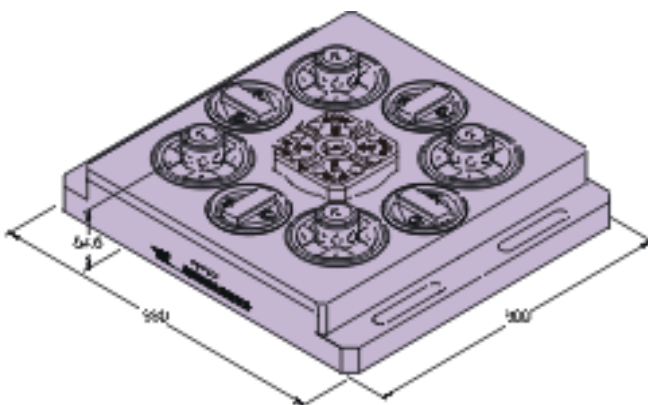
H 8.11.32.16 Combined Pallet Clamper

Same design as for H8.11.32 but with centrally located manual clamper H8.16 for the pallets and holders of the series *HPS80* and the Fixturing Sytem 5000 for Sinking EDM (not for pallet H8.180 and the *MINIFIXplus* electrodes).

Weight approx. 35 kg (77.2 lbs)

H 8.11.32.16.3 Pneumatic Pallet Clamper

H8.11.32.16 with two positioning bores \varnothing 20H7 in the base plate.



H 8.11.32M Pallet Clamper for 3D Measuring Centers

Same design as for H8.11.32.16 but with centrally located pneumatic clamper (not usable for milling, eroding aso.).

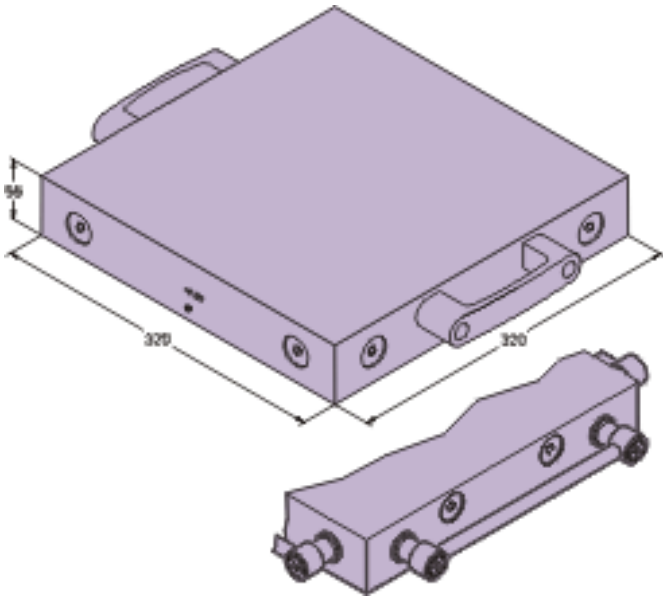
Positioning and repetitive accuracy 0.002 mm (0.00008")
 Clamping force 15000 N
 Clamping force of the center clamper 1500 N
 Max. perm. workpiece weight 300/50 kg (660/110 lbs)
 Weight approx. 35 kg (80 lbs)
 Compressed-air 6 bars
 3m pneumatic hoses are included in the delivery.



Palletizing System 8000HPS320 (320x320 mm (12.60"x12.60") Pallets)

Pallets

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



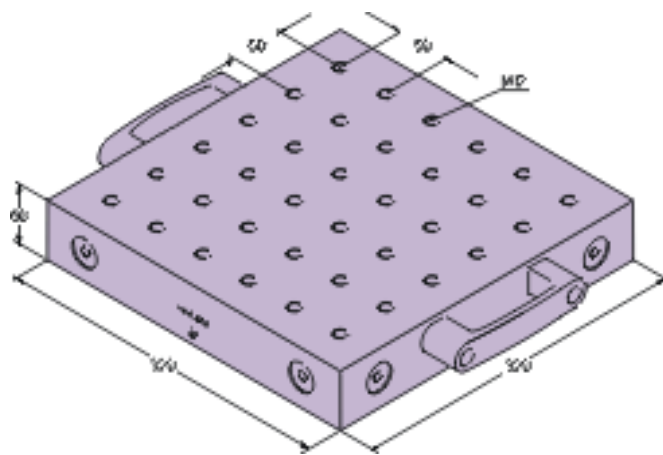
H 8.320 Pallet, for manual change

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. 14 kg (31 lbs)

H 8.320E Pallet

for automatic and manual change, equipped with a gripbar on each side.



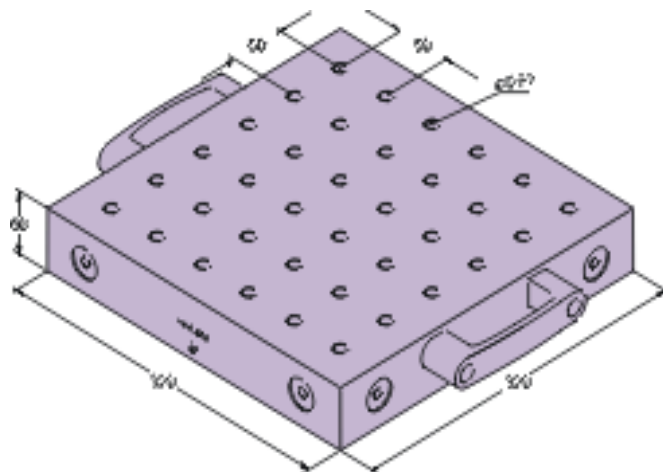
H 8.320G50 Flexible Clamping Pallet, for manual change

Aluminium pallet with 36 M12 threaded bores in steps of 50 mm (1.96").

Flatness	< 0.01 mm (0.0004")
Parallelism	< 0.01 mm (0.0004")
Dimensions	320x320x56 mm (12.6x12.6x2.2")
Weight	approx. 14 kg (31 lbs)

H 8.320G50E Flexible Clamping Pallet

for automatic and manual change, equipped with a gripbar on each side like H8.320E.



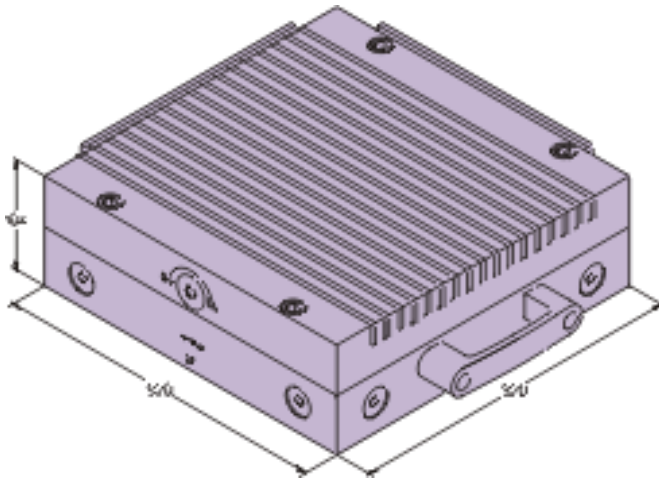
H 8.320GP50 Flexible Clamping Pallet, for manual change

Aluminium pallet with 36 fits \varnothing 12F7 in steps of 50 mm (1.96") \pm 0.02 (0.0008") and M12 threads below.

Flatness	< 0.01 mm (0.0004")
Parallelism	< 0.01 mm (0.0004")
Dimensions	320x320x56 mm (12.6x12.6x2.2")
Weight	approx. 14 kg (31 lbs)

H 8.320GP50E Flexible Clamping Pallet

for automatic and manual change, equipped with a gripbar on each side like H8.320E.

**H 8.320M Magnetic Pallet, for manual change**

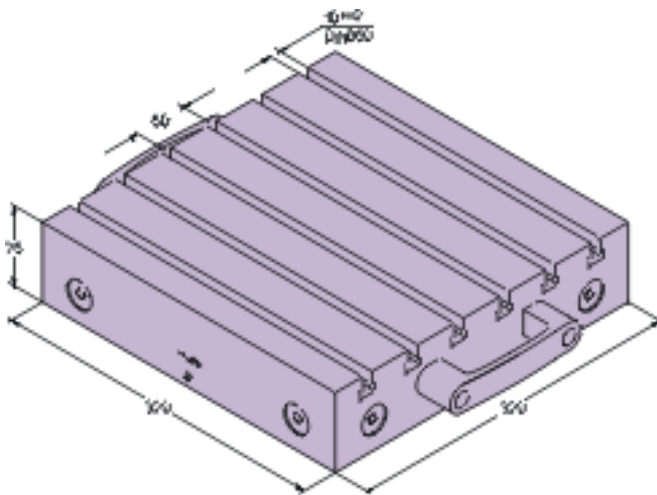
Magnetic pallet with infinitely adjustable clamping force and two end stops for alignment of the workpieces.

Holding force	160 N/cm ²
Magnetic field height	3 mm (0.12")
Flatness	< 0.01 mm (0.0004")
Parallelism	< 0.01 mm (0.0004")
Dimensions	320x320x104 mm (12.6x12.6x4.1")
Weight	approx. 48 kg (102 lbs)

Attention: The magnetism of this pallets can cause measuring errors on a measuring machine.

H 8.320ME Magnetic Pallet

for automatic and manual change, equipped with a gripbar on each side like H8.320E.

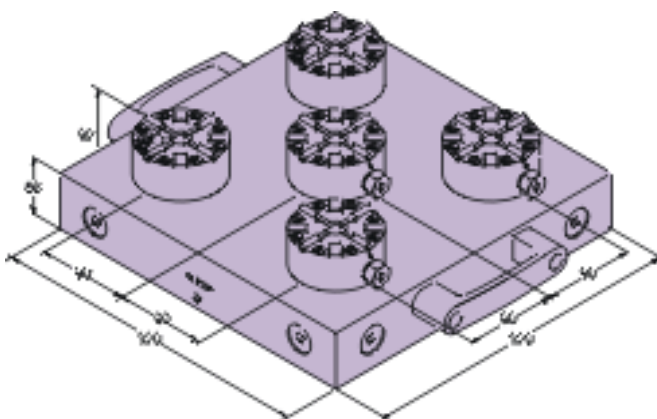
**H 8.320T T-Groove Pallet, for manual change**

Aluminium pallet with six T-grooves 10H12.

Flatness	< 0.01 mm (0.0004")
Parallelism	< 0.01 mm (0.0004")
Dimensions	320x320x75 mm (12.6x12.6x2.95")
Weight	approx. 18 kg (40 lbs)

H 8.320TE T-Groove Pallet

for automatic and manual change, equipped with a gripbar on each side like H8.320E.

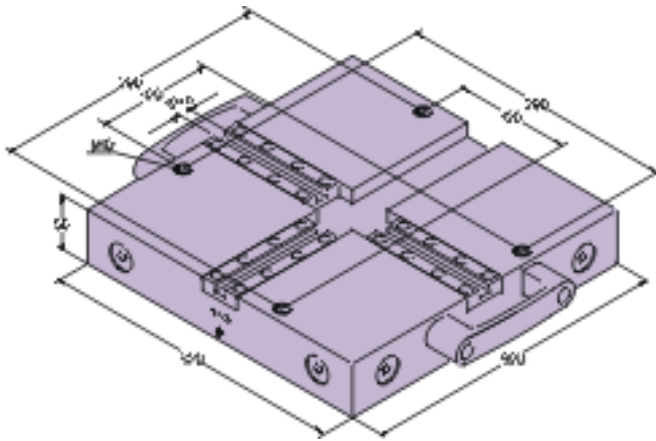
**H 8.320PS5 Pallet with Clampers, for manual change**

Aluminium pallet with five Pallet Clampers H 8.16 for the fixture of all holders and pallets of the Palletizing System 8000HPS80 and the Fixturing System 5000 for Sinking EDMs.

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)

H 8.320PS5E Pallet with Clampers

for automatic and manual change, equipped with a gripbar on each side like H8.320E.

**Palletizing System 8000HPS320 (320x320 mm (12.60"x12.60") Pallets)****H 8.320P 3-Pin Positioning Pallet, for manual change**

Aluminium pallet with hard steel positioning grooves for fixing the Positioning Plates H8.320MF9, H8.320U5, H8.320U9 and for workpiece and fixture palletizing.

Flatness	< 0.01 mm (0.0004")
Parallelism	< 0.01 mm (0.0004")
Positioning accuracy (pos. plate)	< 0.01 mm (0.0004")
Dimensions	320x320x56 mm (12.6x12.6x2.2")
Weight	approx. 18 kg (40 lbs)

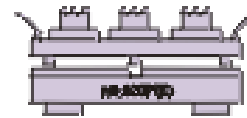
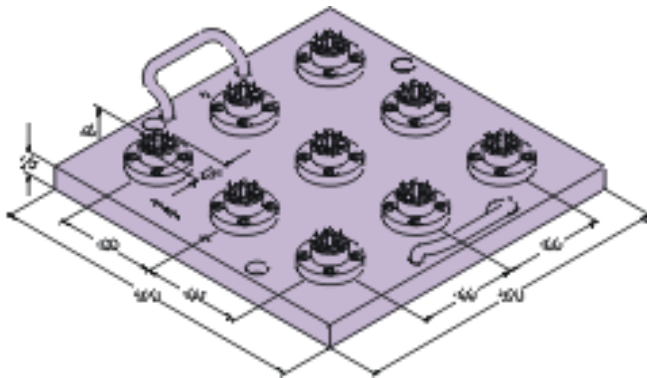
H 8.320PE 3-Pin Positioning Pallet

for automatic and manual change, equipped with a gripbar on each side like H8.320E.

H8.320MF9 MINIFIX Positioning Plate

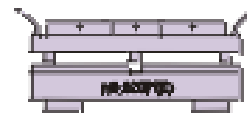
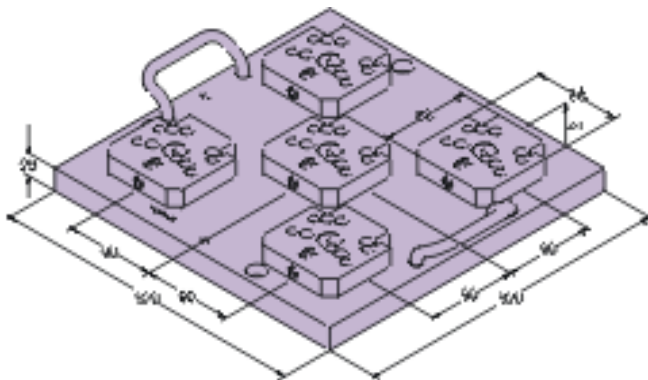
MINIFIX positioning plate with nine MINIFIX fixtures for machining of the MINIFIX and MINIFIXplus electrodes. The MINIFIX positioning plate is mounted to the 3-Pin Positioning Pallet H8.320P(E).

Dimensions	320x320x46 mm (12.6x 12.6x1.81")
Weight	approx. 22 kg (48.50 lbs)

**H 8.320U5 U-Holder Positioning Plate**

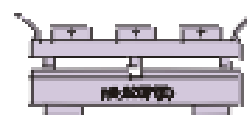
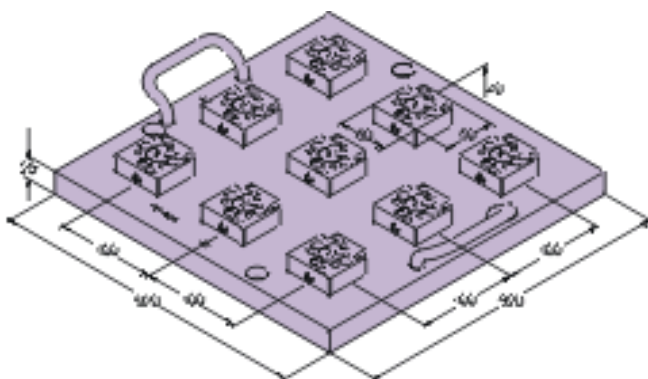
U-holder positioning plate with five U-holder fixtures for machining the electrodes held on the U-Holder H 8.88.1. The U-holder positioning plate is mounted to the 3-Pin Positioning Pallet H8.320P(E).

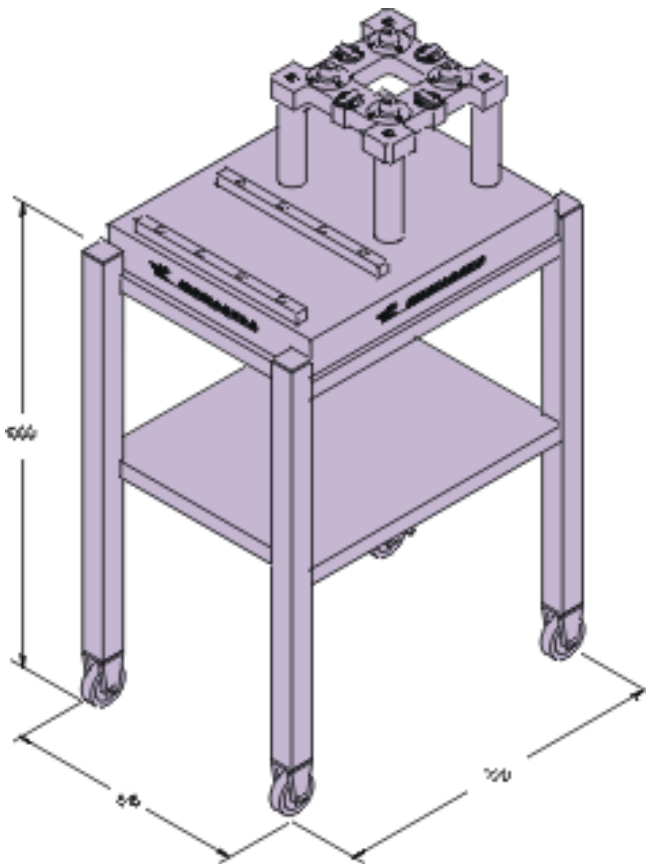
Dimensions	320x320x41 mm (12.6x12.6x1.61")
Weight	approx. 22 kg (48.50 lbs)

**H 8.320U9 U-Holder Positioning Plate**

U-holder positioning plate with nine U-holder fixtures for machining the electrodes held on the U-Holder H 5.50.1. The U-holder positioning plate is mounted to the 3-Pin Positioning Pallet H8.320P(E).

Dimensions	320x320x40 mm (12.6x12.6x1.58")
Weight	approx. 22 kg (48.50 lbs)





H 8.32.900 Presetting Work Station

Mobile presetting work station for the Palletizing System 8000HPS320.

For checking the Z-height and for aligning the workpieces on the X- and Y-axis.

The presetting work station includes a sturdy trolley of stainless steel and a granite surface plate 600x500x70mm (23.6x19.7x 2.8") of accuracy class 0.

The measuring plate includes a device for fixing the HPS320 Pallets and two guide rails aligned parallel to the straight edge of the measuring support. A measuring support and a dial gauge (accuracy 0.002 mm (0.00008")) are included in the delivery.

Load

max. 150 kg (330 lbs)

H 8.32.901 Presetting Work Station

Same design as for H8.32.900 but without mobile trolley.

H 8.32.902 Presetting Work Station

Delivered with the device for fixing the HPS320 Pallets and the two guide rails which serve as straight edge for the measuring support. These individual elements serve for self-assembly on an existing granite surface plate.



3D Measuring Center

For the simple electrode and workpiece measurement and for determining the position of the coordinates electrode/workpiece in relation to the centering Vee block of the holder or the pallet. The usage of a measuring machine directly at the working place offers the following advantages:

- High measuring capacity
- Economical and precise
- Very user-friendly
- For all purposes
- On-line transfer of the measurement data

Workpiece Fixturing

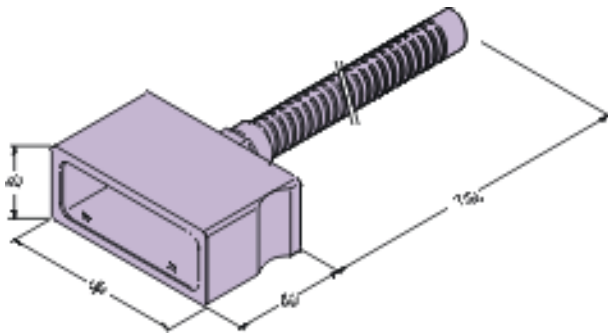
For fixing the HIRSCHMANN electrode holders or workpiece pallets a workpiece clamber H8.11.32M is positioned on the measuring plate.



Palletizing System 8000HPS320 (320x320 mm (12.60"x12.60") Pallets)

Accessories

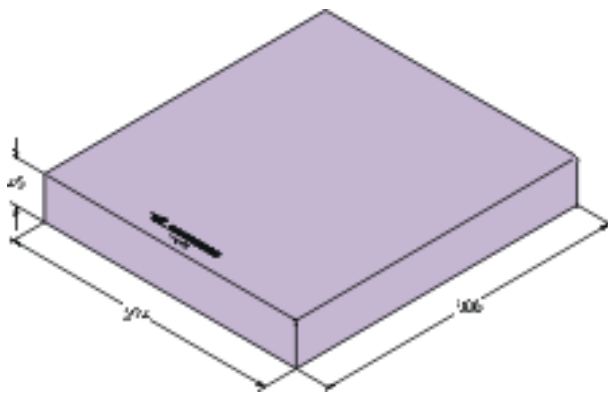
for Pallet Clampers H8.11.32...



H 8.32.30 Flexible Tube

For protecting the pneumatic tubes on the pallet clampers during the machining.

Length 1500 mm (59")



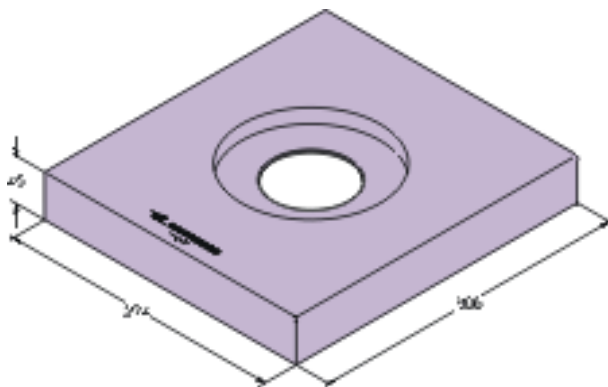
H 8.32.32 Guard

For Pallet Clamper H8.11.32.

Protects the clamping area and the seals of the pallet clamper against coolant and chips while not used.

Dimensions 274x306x46 mm (10.8x12x1.8")

Weight approx. 0.5 kg (1.1 lbs)



H 8.32.33 Guard

For Pallet Clamper H8.11.32.16

Protects the clamping area and the seals of the pallet clamper against coolant and chips while not used.

Dimensions 274x306x46 mm (10.8x12x1.8")

Weight approx. 0.5 kg (1.1 lbs)



H 8.32.34 Small Seal

Spare part for Pallet Clampers H.8.11.32...

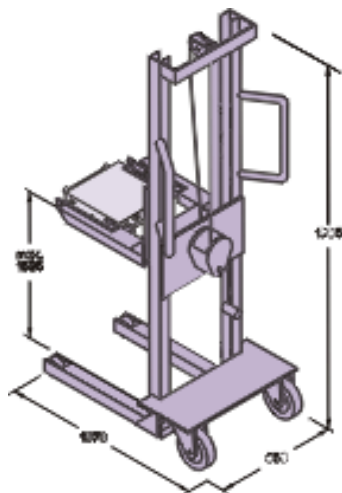


H 8.32.35 Large Seal

Spare part for Pallet Clampers H8.11.32...



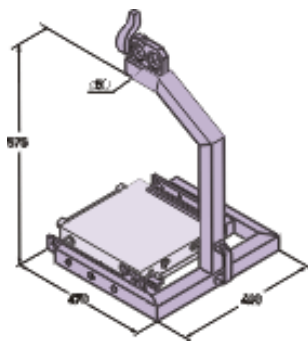
Pallet Handling



H 8.32.50 Pallet Carrier

The HIRSCHMANN pallet trolley guarantees the easy transport of all *HPS320* Pallets. Its simple handling allows a safe and easy transport of even heavy workpieces from one machine to another.

Carrying force 200 kg (440 lbs)



H 8.32.51 Transport Device

The transport device in combination with a workshop crane serves for transporting all *HPS320* Pallets. The exact positioning of the pallets on the corresponding pallet clampers is also possible without any difficulties. This is particularly necessary for pallets with heavy workpieces to enable the operator an ergonomical and safe working.

Carrying force 300 kg (660 lbs)



EROBOT

Handling devices for the automatic loading of sinking EDMs, milling, drilling and grinding machines etc. are to be found on page 23.





Palletizing System 8000HPS80 (88/128/180 mm (3.47"/5.04"/7.09") Pallets and Holders)

The **HPS80** is used as reference system on milling and drilling machines, surface and jig milling machines and sinking EDMs for fixture and workpiece palletizing. The pallets can be changed manually or automatically with the EROBOT Workpiece Changer.

The compatibility with the Fixturing System 4000 for wire EDMs and the Fixturing System 5000 for sinking EDMs is guaranteed.

Characteristics:

- **Steel and aluminium pallets**
- **Highly precise, positive clamping**
- **Integrated x-y-z-references**
- **Manual and automatic change**
- **Solid, compact, economical**

Technical data:

Pallet sizes	□88 (3.47") - □180 mm (7.09")
Repetitive accuracy	0.002 mm (0.00008")
Indexing accuracy 4x90°	0.004 mm (0.00016")
Loading weight	up to 100 kg (220 lbs)
Clamping force of the clampers	up to 25000 N



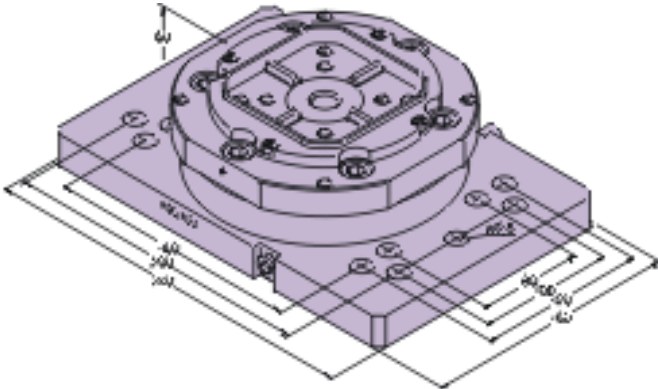


Pneumatic Pallet Clampers

for the fixture of pallets and holders of the series HPS80

- Manual and automatic handling
- Not affected by dirt because of continuous seal

- Alignment surface is parallel to the centering block
- Cleaning nozzles for the automatic cleaning



H 8.11.3 Pallet Clamper

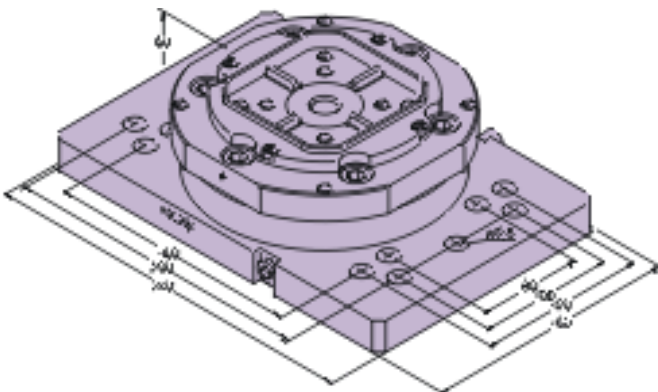
Central clamping is normally closed. The clamping is opened pneumatically.

Positioning and repetitive accuracy 0.002 mm (0.00008")
 Clamping force (without pneumatic assistance) 10000 N
 Clamping force (with pneumatic assistance) 18000 N
 Compressed air 6 bars
 Weight 11 kg (24.25 lbs)

3x3m pneumatic hoses are included in the delivery.

H 8.11.3.3 Pallet Clamper

H8.11.3 with two positioning bores 20H7, spacing 200 mm (8.87").



H 8.86 Power Clamper

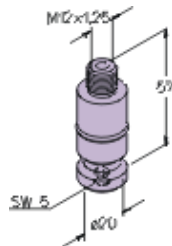
For heavy machining work.
 Same design and function as for H8.11.3, but with increased clamping force for Clamping Journal H8.611.

Positioning and repetitive accuracy 0.002 mm (0.00008")
 Clamping force (without pneumatic assistance) 10000 N
 Clamping force (with pneumatic assistance) 25000 N
 Compressed air 6 bars
 Weight 11 kg (24.25 lbs)

The Clamping Journal H8.611 is supplied with H8.86.

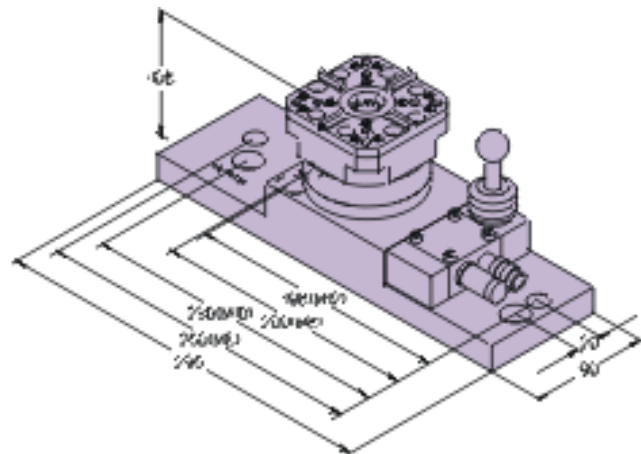
H 8.86.3 Power Chuck

H8.86 with two positioning bores 20H7, spacing 200 mm (8.87").



H 8.611 Clamping Journal

This clamping journal is used when pallets and holders are mounted on Power Clamper H8.86 and is replaced by the Clamping Journal H5.611.



H 8.11.20M Pallet Clamper for 3D Measuring Centers

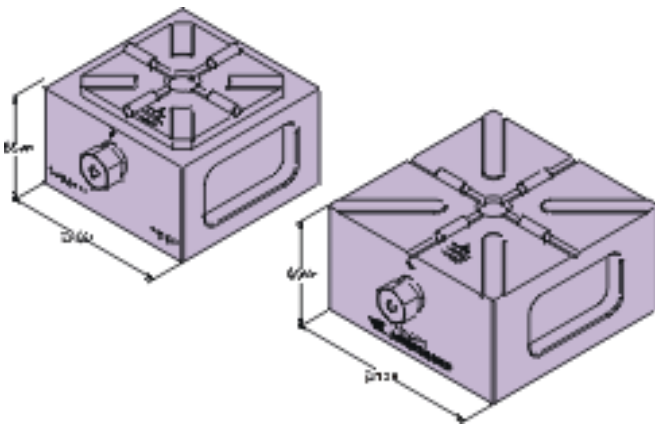
Pneumatic Pallet Clamper with integrated, manual pneumatic control for use at a 3D measure center (not usable for milling, eroding aso.).

Positioning and repetitive accuracy 0.002 mm (0.00008")
 Clamping force 1500 N
 Max. load 50 kg (110 lbs)
 Compressed air 4,5 - 6 bars
 Weight 11 kg (24.25 lbs)

3m pneumatic hoses (6x1mm) are included in the delivery.

**Palletizing System 8000HPS80 (88/128/180 mm (3.47"/5.04"/7.09") Pallets and Holders)****Manual Pallet Clampers**

for the fixture of pallets and holders of the series HPS80

**H 8.811 Pallet Clamper**

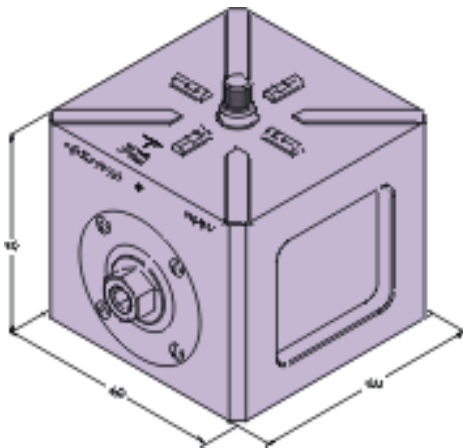
With four precision-ground contact surfaces for the alignment of the H8.811 on the machine.
Suitable for use in dielectric.

Positioning and repetitive accuracy 0.002 mm (0.00008")
Clamping force 10000 N
Weight 3.5 kg (7.7 lbs)

H 8.811.1 Pallet Clamper

Same design as for H8.811 but with additional Z-support for Pallet H8.128.. and H8.180...

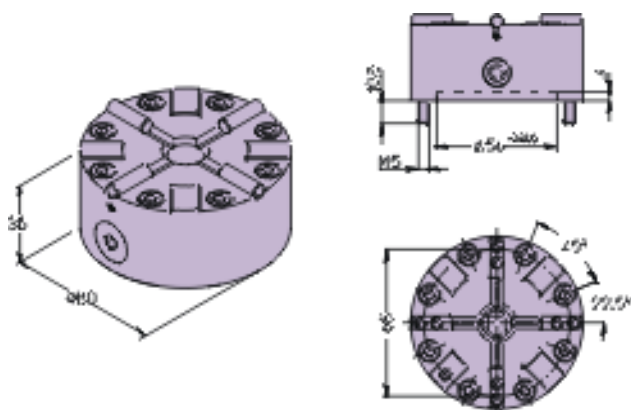
Weight 6.5 kg (14 lbs)

**H 8.812 Pallet Clamper**

For heavy machining work, especially on workpieces on Pallets H8.88, H8.128 and H8.180. With mechanical, central power clamping and four precision-ground contact surfaces, also used for the alignment of the H8.812 on the machine (the dimension from the center to the contact surface is engraved).

Clamping takes place by a central threaded screw and not by the clamping journal.

Positioning and repetitive accuracy 0.002 mm (0.00008")
Clamping force 25000 N
Weight 12 kg (26.45 lbs)

**H 8.16 Pallet Clamper**

Same design as for H8.811, but cylindrically. Equipped with sunk hexagonal-socket, clamping screw, centering seat and four M5 fastening screws.

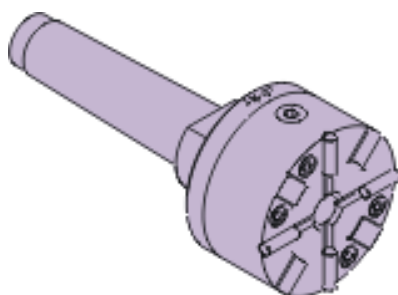
For rotating use.

H 8.16.1 Pallet Clamper

Same design as for H8.16, but with protuberant hexagonal-socket, clamping screw as for H8.811.

For stationary use.

Suitable for use in dielectric.

**H 8.90.2 Tool Clamper**

with taper shank ISO40 and S20x2 external thread.

H 8.91 Tool Clamper

with taper shank MK4 and M16 internal thread.

H 8.91.1 Tool Clamper

with taper shank MK5 and M20 internal thread.

H 8.92 Tool Clamper

with cylindrical shank, \varnothing 25 mm (0.984").

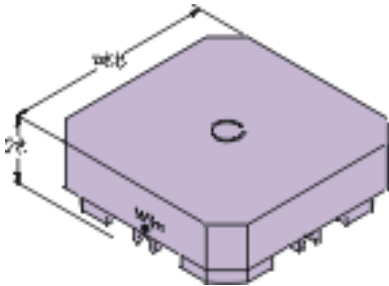


Pallets

for the precise workpiece and fixture palletizing

- One-piece steel or aluminium pallets
- Repetitive accuracy < 0.002mm (0.00008")
- Integrated x-y-z-references

- Rust-proofed by chemical nickel-plating
- Reference mark
- Solid, compact, economical



H 8.88 Pallet, only for manual change

H 8.88E Pallet, for automatic and manual change

For workpieces and fixtures up to $\varnothing \square 100$ mm (3.94").
Delivered without Clamping Journal H5.611 and without Centering Bush H5.611.1.

Weight 1.2 kg (2.645 lbs)

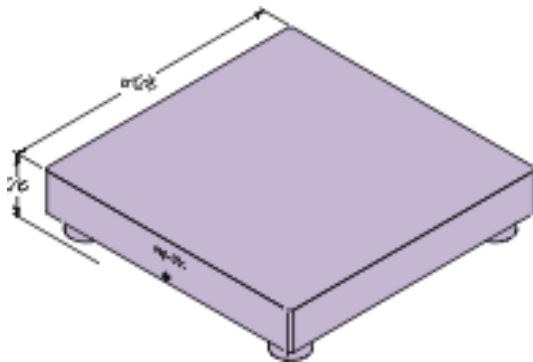
H 8.88A Pallet, only for manual change

H 8.88AE Pallet, for automatic and manual change

Same design as for H 8.88, but made of aluminium.

Delivery: Set of 5 pieces.

Weight 0.25 kg (0.551 lbs)



H 8.128 Pallet, only for manual change

H 8.128E Pallet, for automatic and manual change

For workpieces and fixtures up to $\varnothing \square 160$ mm (6.30").
Delivered without Clamping Journal H5.611 and without Centering Bush H5.611.1.

Weight 2.5 kg (5.51 lbs)

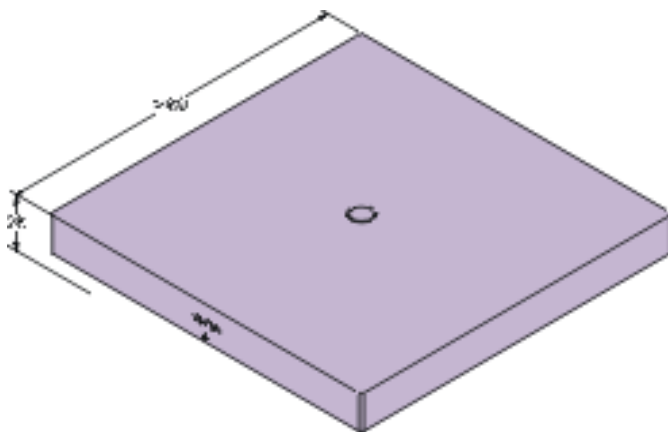
H 8.128A Pallet, only for manual change

H 8.128AE Pallet, for automatic and manual change

Same design as for H8.128, but made of aluminium.

Delivery: 1 or set of 5 pieces.

Weight 0.5 kg (1.10 lbs)

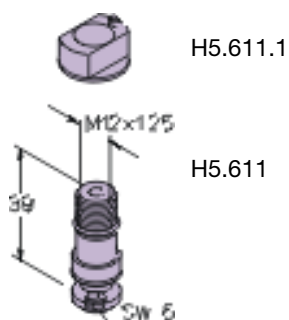


H 8.180 Pallet, only for manual change

H 8.180E Pallet, for automatic and manual change

For workpieces and fixtures up to $\varnothing \square 200$ mm (7.87").
Delivered without Clamping Journal H5.611 and without Centering Bush H5.611.1.

Weight 5.0 kg (11.02 lbs)



H 5.611 Clamping Journal

H 5.611.1 Centering Bush

For Pallets H8.88., H8.128., H8.180...

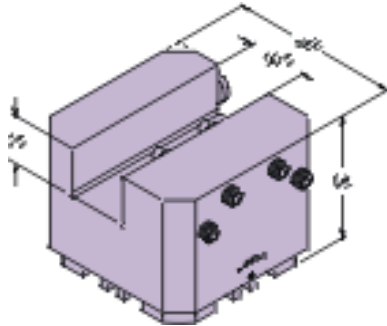


Palletizing System 8000HPS80 (88/128/180 mm (3.47"/5.04"/7.09") Pallets and Holders)

Universal Holder

for the precise fixing of workpieces

Made of chemically nickel-plated steel with hardened x-y-z references



H 8.88.3 F-Holder, only for manual change

H 8.88.3E F-Holder, for automatic and manual change

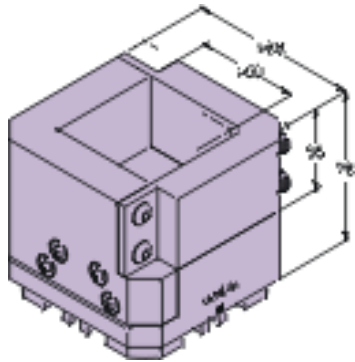
Flat holder for parts up to 30mm (1.18") thickness.

The contact surfaces are aligned parallel and precisely positioned in relation to the centering Vee blocks.

Repetitive accuracy when clamping and unclamping, measured 50 mm (1.968") below the V-holder < 0.01 mm (0.0004").

Weight

3.1 kg (6.83 lbs)



H 8.88.50 V-Holder, only for manual change

H 8.88.50E V-Holder, for automatic and manual change

Vee block holder for the central fixture of round and/or rectangular material up to $\varnothing \square 50$ mm (1.968").

The contact surfaces are aligned parallel and precisely positioned in relation to the centering Vee blocks.

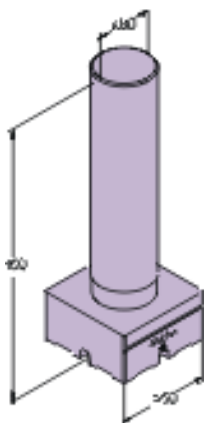
Repetitive accuracy when clamping and unclamping, measured 50 mm (1.968") below the V-holder < 0.01 mm (0.0004").

Weight

3.4 kg (7.50 lbs)

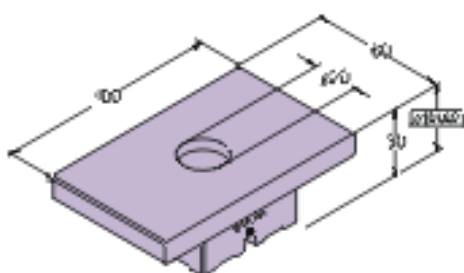
Test Elements

for determining the axis position



H 5.50.8 Test Bar

For aligning and checking the axis and radial position of the pallet clammers, and for concentricity and system checks.



H 5.50.9 Aligning Gauge

For aligning and checking the pallet clammers in the X-/Y-direction, and for checking the axis position and determining the center position.

H 8.80.900 Presetting Work Station

Mobile presetting work station for the Palletizing System 8000HPS80.

For checking the Z-height and for aligning the workpieces on the X- and Y-axis.

The presetting work station includes a sturdy trolley of stainless steel and a granite surface plate 600x500x70mm (23.6x19.7x 2.8") of accuracy class 0.

The measuring plate includes a device for fixing the HPS80 pallets and one guide rails aligned parallel to the straight edge of the measuring support. A measuring support and a dial gauge (accuracy 0.002 mm (0.00008")) are included in the delivery.

Load

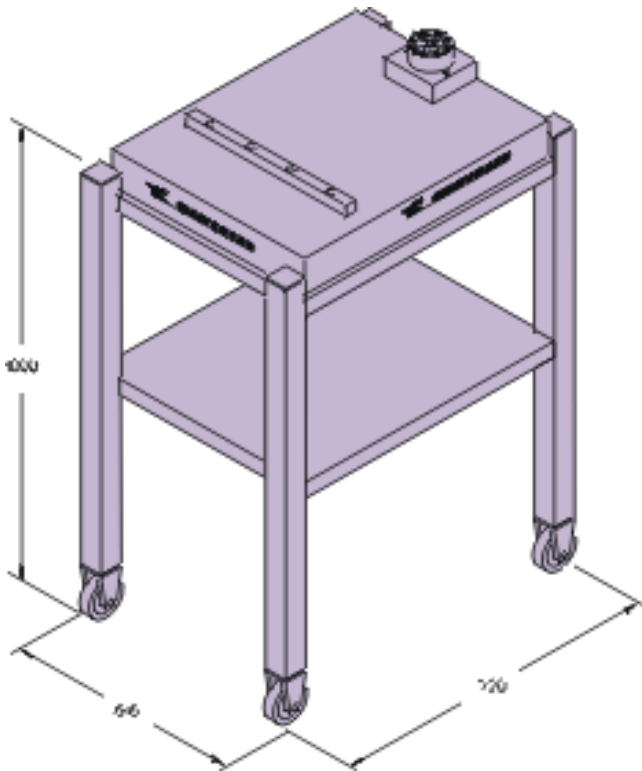
max.100 kg (220 lbs)

H 8.80.901 Presetting Work Station

Same design as for H 8.80.900 but without mobile trolley.

H 8.80.902 Presetting Work Station

Delivered with the device for fixing the HPS80 Pallets and holders and a guide rail which serve as straight edge for the measuring support. These individual elements serve for self-assembly on an existing granite surface plate.



3D Measuring Center

For the simple electrode and workpiece measurement and for determining the position of the coordinates electrode/workpiece in relation to the centering Vee block of the holder or the pallet. The usage of a measuring machine directly at the working place offers the following advantages:

- High measuring capacity
- Economical and precise
- Very user-friendly
- For all purposes
- On-line transfer of the measurement data

Workpiece Fixturing

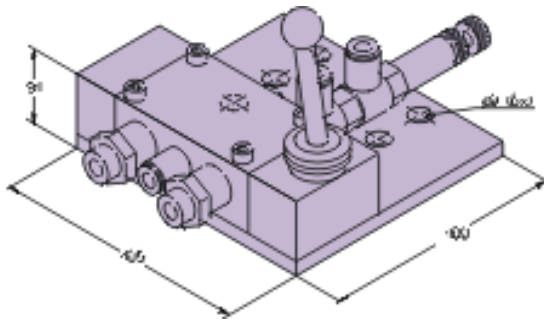
For fixing the HIRSCHMANN electrode holders or workpiece pallets a workpiece clamber H8.11.20M or H8.11.32M is positioned on the measuring plate.



Palletizing System 8000 HPS320/HPS80

Pneumatic Accessories

for controlling the pneumatic clammers



H 4101 Pneumatic Control Unit

Manual control unit for activating (opening, cleaning, clamping) the pneumatic clammers.

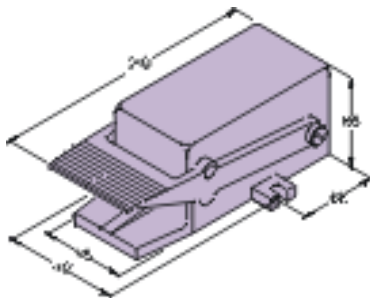
Working pressure max. 10 bars

H 8.32.10 Electropneumatic Control Unit

Electropneumatic control unit (pneumatic valves and pressure switch unit) for clamping and/or opening and monitoring the pneumatic pallet clammers by means of the machine control.

Working pressure max. 8 bars

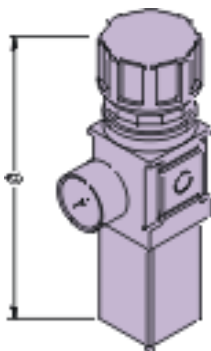
Operating voltage 24V=



H 8.32.12 Footswitch

For opening or closing the pneumatic pallet clammers manually.

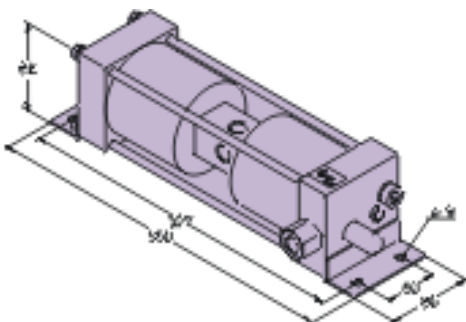
Working pressure max. 8 bars



H 8.32.13 Pressure Regulator

Service unit including water separator with replaceable sinter filter and pressure regulator for pressure control.

Pressure range 0 to 7 bars



H 8.32.14 Pneumatic Pressure Intensifier

For increasing the pressure for air meshes with a working pressure of < 6 bars.

Supply pressure max. 8 bars

Transmission ratio 1:2

Weight 3.3 kg (7.27 lbs)



Handling Devices

for the automatic loading of machine tools with workpieces and tools



EROBOT 8810

For the automatic loading of sinking EDMs, milling, drilling and grinding machines etc. with workpieces mounted on pallets and holders of the series *HPS80*.

Workpiece magazine positions	10
Max. workpiece weight/magazine position	40 kg (88 lbs)
Total load	200 kg (441 lbs)
Dimensions	1400x1400x1800 mm (55x55x71")



EROBOT 8810/20/30/40

For the automatic loading of sinking EDMs with workpieces mounted on pallets and holders of the *HPS80* series and electrodes fixed on pallets and holders of the Fixturing System 5000.

Workpiece magazine positions	10
Max. workpiece weight/magazine position	40 kg (88 lbs)
Total load	200 kg (441 lbs)
Tool magazine positions	20/30/40
Max. electrode weight/magazine position	8 kg (17 lbs)
Total load	50 kg (110 lbs)
Dimensions	1400x1400x1800 mm (55x55x71")



EROBOT 8006

For the automatic loading of sinking EDMs, milling, drilling and grinding machines etc. with workpieces fixed on pallets of the series *HPS320*.

Workpiece magazine positions	6
Max. workpiece weight/magazine position	80 kg (176 lbs)
Total load	300 kg (661 lbs)
Dimensions	1400x1400x1800 mm (55x55x71")



EROBOT 8006/30

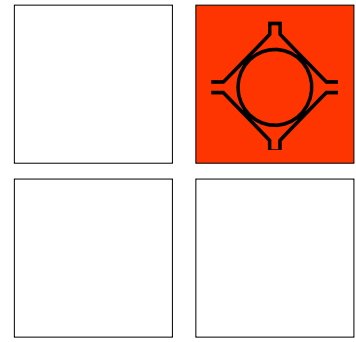
For the automatic loading of sinking EDMs with workpieces fixed on pallets of the series *HPS320* and with electrodes fixed on pallets and holders of the Fixturing System 5000 (see Fixturing System 5000 catalogue).

Workpiece magazine positions	6
Max. workpiece weight/magazine position	80 kg (176 lbs)
Total load	300 kg (661 lbs)
Electrode magazine positions	30
Max. electrode weight/magazine position	8 kg (17 lbs)
Total load	50 kg (110 lbs)
Dimensions	1400x1400x1800 mm (55x55x71")

More types upon request

Palletizing System 8000

Integrated workpiece management for manufacturing



HIRSCHMANN integrated Palletizing-, Fixturing- and Automation Systems offer reliable, simple to use and accurate solutions for all Machine centers, Wire and Sinking EDM. Free catalogues on all our fixturing solutions are available upon request.

Representatives, consultants and delivery stocks in:

Let HIRSCHMANN's proven Fixturing-, Palletizing- and Handling Systems assure your business greater productivity and profits from the CAD department to the shop floor.

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