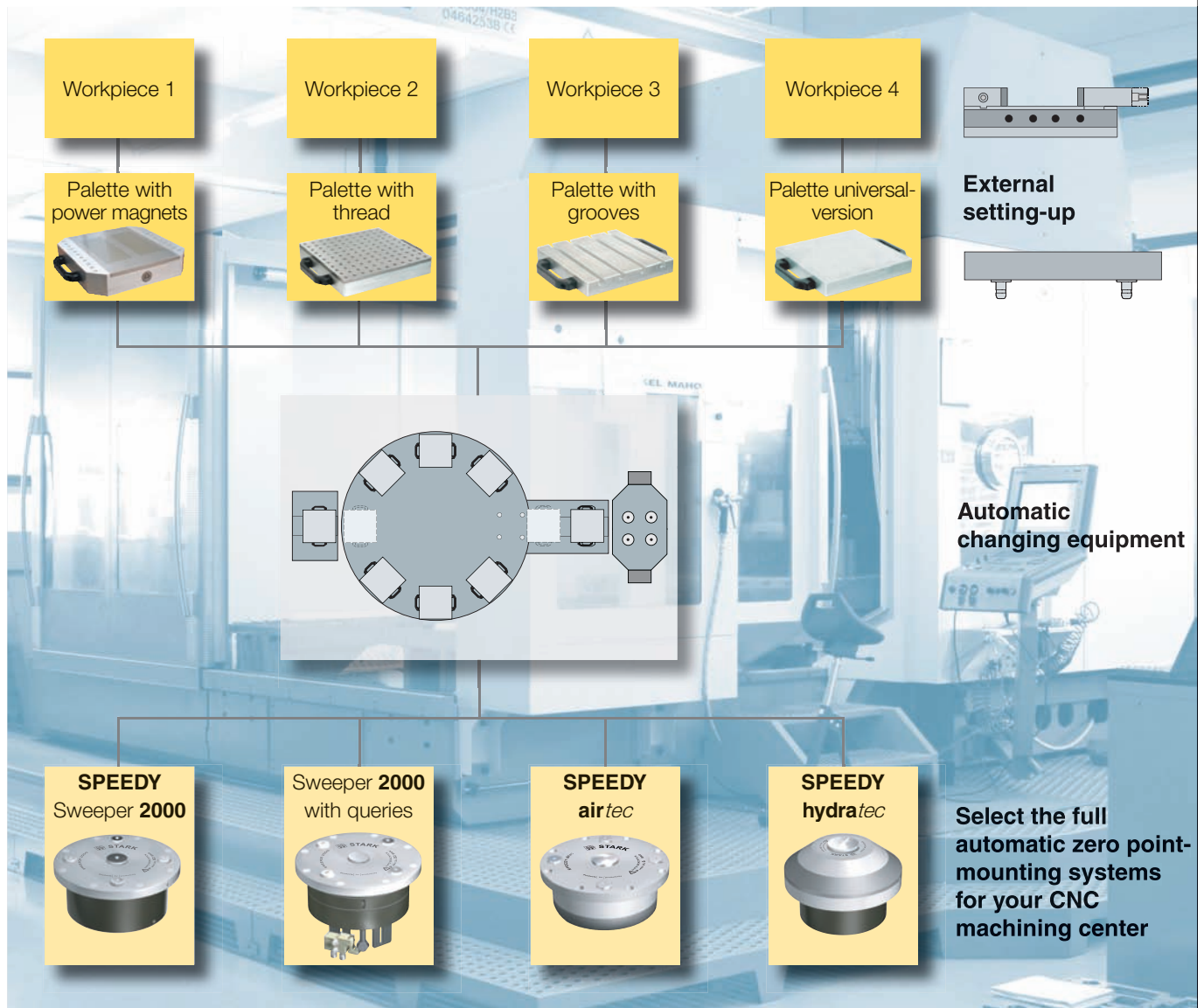


STARK - systems for innovative production

Driven by technological progress, tooling machines and processing tools have experienced an enormous leap forward and their productivity has been greatly increased. Only setting-up workpieces on the tooling machines still requires downtimes.

As pioneers of the zero point mounting technology, the strategy of STARK will always remain the optimization of setting up times. Therefore, STARK now offers solutions for complete automation projects. From paletting systems and the proven SPEEDY clamping devices up to systems for full automatic production.

Increase the productivity of your machine park.



Workpiece 1
Workpiece 2
Workpiece 3
Workpiece 4

Palette with power magnets
Palette with thread
Palette with grooves
Palette universal-version

External setting-up
Automatic changing equipment

SPEEDY
Sweeper 2000
Sweeper 2000 with queries
SPEEDY
airtec
SPEEDY
hydratec

Select the full automatic zero point-mounting systems for your CNC machining center

The complete solution – for full automatic production

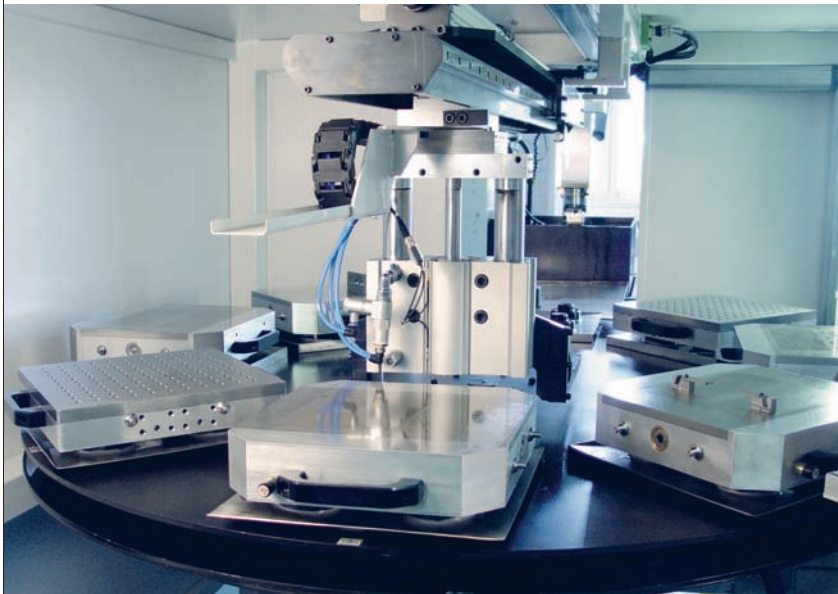
Take a close look at STARK systems and products to optimize and automate tool changing in your machine park.

In the wake of external setting-up and mounting systems, incorporating a palette changer is the next step towards increasing productivity.

Detailed information on the individual products can be found in the Internet on our homepage or have our competent specialists advise you directly.

Palette changer

- Can be installed on all common CNC machines
- Modular structure
(setting up space - palette changer - machine interface)
- Autonomous control unit with data interface (machine specific)
- High reliability and precision
- Comprehensive assortment of palettes
- Complete system solutions



With batch sizes getting smaller, growing numbers and varieties of parts, low inventories and sales related production, setting-up times and the ensuing costs are becoming an ever growing factor in production costs.

Companies that can significantly reduce setting up times and the ensuing costs will gain immense advantages over their competitors. They are in the position to profitably producing the smallest of batches or even single components. They are in the position of synchronizing the production and assembly of products on a **just in time** basis. This type of strictly on demand production reduces storage costs significantly as they only arise during the production period.

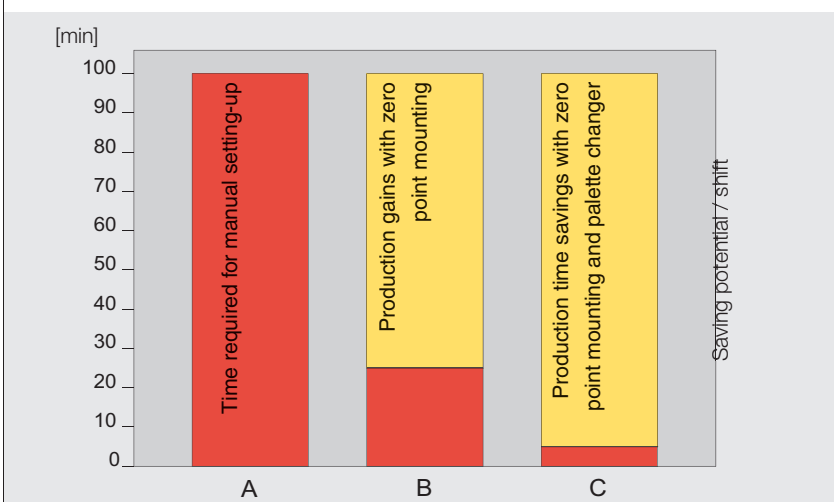
From external setting-up, transfer to the CNC machine up to the accurately repeatable zero point clamping - the STARK palette changer provides all these productivity enhancements.

- Setting up existing machine parks more efficiently
- Automatic production
- Longer machine operation cycles
- External setting-up
- Minimal setting-up costs
- Standardized setting-up procedures
- Quality increase by error avoidance
- Reduction of defective finished products
- Machine independent zero point mounting technology, unified gauge for bore holes
- Productivity-enhancing

Potential savings

This diagram on the left shows how much shorter setting-up times are at the CNC based on the following empirical data:

- 20 minutes are required to manually mount a workpiece
- 5 workpiece changes per shift (8 h)
- 5 minutes are required for a manual palette change
- 1 minute is required for an automatic palette change



- A Setting-up the CNC (manually mounting the workpiece)
- B Manual palette change (after external setting-up on a palette with zero point-mounting system)
- C Automatic palette change with palette changer (without considering automatic shifts)

STARK palette changer - SPW

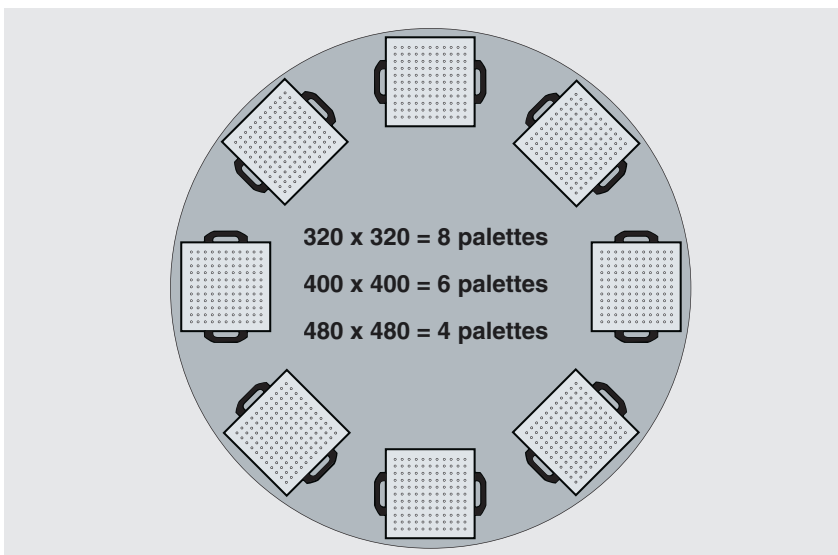


With its compact size, the SPW palette changer is easily installed in CNC machining centers. Depending on the equipment, up to 8 machine palettes can be loaded.

STARK offers a wide range of palettes with power magnets, threads and T-grooves as well as universal palettes – and manufactures special palettes upon customer request.

Control unit options

- Workpiece recognition with light barriers (loaded / empty palette)
- Palette identification



STARK offers palette changers in 3 different sizes:

Version SPW 8320

Capacity: 8 palettes at 320 x 320 mm

Version SPW 6400

Capacity: 6 palettes at 400 x 400 mm

Version SPW 4480

Capacity: 4 palettes at 480 x 480 mm

- All palettes are equipped with hand grips.
- The permissible transfer weights are 120 kg or 200 kg depending on size (per palette with workpiece).

Order no.	Designation	Dimensions [mm]			Machine weight [kg]	Number Palettes	Palette-size [mm]	Transfer-weight [kg]
		L	W	H				
104 943	SPW 8320	1740	1660	1660	1600	8	320 x 320	120*
104 944	SPW 6400	1740	1660	1660	1600	6	400 x 400	120*
104 945	SPW 4480	1740	1660	1660	1600	4	480 x 480	200

* Augmented transfer weight (max. 200 kg) upon request.

Equipment palettes

Palette with power magnets



Material:

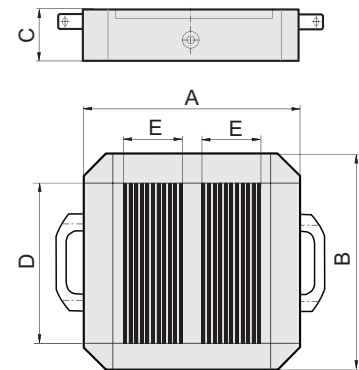
Body made of aluminum with pole flange St 37 / V4A, including gripper unit and nipple bore holes (open gauge). Additional threaded bore holes for stop strips and stop brackets are possible.

Application:

For cutting grinding, washing and measuring.

Technical specifications:

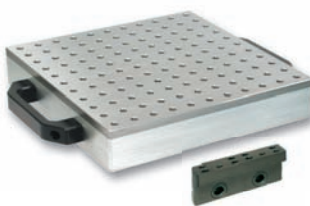
Parallely: 0,03 mm
 Magnet field height: 4 mm
 Wear of the pole flange: 2 mm
 Nominal clamping force: 140 N/cm²
 Quiery: 1,9 mm



Order no.	Designation	Dimensions [mm]					Sectioning point	Weight [kg]
		A	B	C	D	E		
812 501	PPM 320	320	320	60	206	80	1	25
812 502	PPM 400	400	400	94	293	125	2	32
812 503	PPM 480*	480	480	-	-	-	-	-

* Version as electro permanent-clamping plate. Technical data upon request.

Palette with thread



Material:

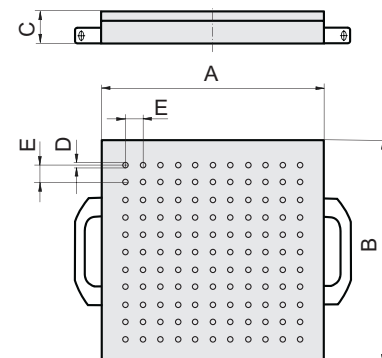
Body made of aluminum with screwed on, hardened and stainless steel plate with thread, pallette including gripper unit and nipple bore holes (open gauge).

Application:

For cutting, grinding, washing and measuring.

Technical specifications:

Parallely: 0,03 mm
 Surface: hardened
 Clamping devices: available upon request



Order no.	Designation	Dimensions [mm]			Thread D	Thread grid E	Number of threads	Weight [kg]
		A	B	C				
812 204	PMG 320	320	320	46	M8	25	121	22
812 208	PMG 400	400	400	52	M8	50	64	35
812 206	PMG 480	480	480	52	M8	50	81	53

Palette with grooves



Material:

Aluminium with engraved T-grooves, palette including gripper unit and nipple bores (open gauge).

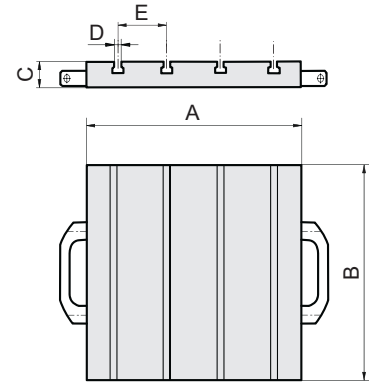
Application:

For cutting, grinding, washing and measuring.

Technical specifications:

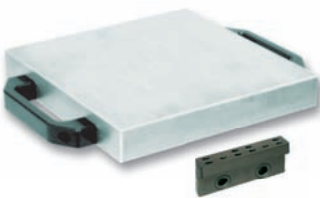
Parallelity: 0,03 mm

Clamping devices: available upon request



Order no.	Designation	Dimensions [mm]			Dimensions [mm]	Grid T-grooves E	Number of T-grooves	Weight [kg]
		A	B	C	T-grooves D H8			
812 304	PMN 320	320	320	30	12*	75	5	9,50
812 308	PMN 400	400	400	52	12*	70	6	22,00
812 306	PMN 480	480	480	52	12*	70	7	36,00

Universal palette



Material:

Aluminum, palette including gripper unit and nipple bores on palettes (open gauge).

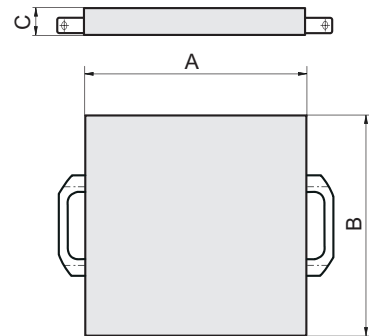
Application:

Fro cutting, grinding, washing and measuring.

Technical specifications:

Parallelity: 0,03 mm

Clamping devices: available upon request



Order no.	Designation	Dimensions [mm]			Weight [kg]
		A	B	C	
812 401	PU 320	320	320	30	9,30
812 402	PU 400	400	400	40	17,00
812 403	PU 480	480	480	40	25,00