

CHAPTER ARRANGEMENT

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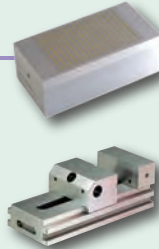


Pallet systems

Chapter 01

- Product range overview Pallets
- Screw-threaded Pallet / Sectioned T-slot Pallet
- T-slot Pallet / Uni Pallet
- Magnet Pallet / POWER-Magnet Pallet
- Multi Pallet
- Screw-threaded Circular Pallet / T-slot Circular Pallet / Uni Circular Pallet
- Magnet Circular Pallet / POWER-Magnet Circular Pallet

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Clamping products

Chapter 02

- Neodymium Magnetic Block
- Precision Pull Down Vice
- Precision Mini Pull Down Vice
- T-slot Mechanical Clamp, single / double
- Precision 3-jaw Chuck / Holding Block

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Electrode fixtures

Chapter 03

- Electrode Uni Fixture
- Collet-Electrode Fixture / Electrode Fixture / Collet
- Adapter Flange / Exchange Set / Gasket
- SET Electrode Fixtures

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Rotary Indexers

Chapter 04

- Precision Rotary Indexer
- NC - Rotary Indexer
- Rotary Indexer with direct drive

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Transport systems & accessories

Chapter 05

- Rolling Transporter "SAV-systems-Lift"
- Lifting Devices
 - Pallet Lifter
 - Adjustable Pallet Lifter
 - Universal Permanent Lift Magnet

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Automation solutions

Chapter 06

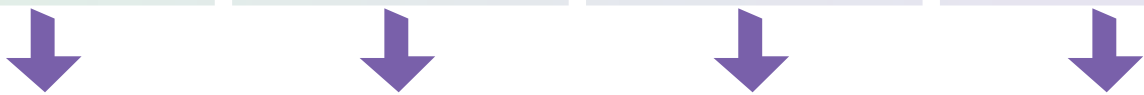
- Pallet Changer "SAV-Pallet Changer 1600"



WORKHOLDING AND AUTOMATION

PRODUCT RANGE OVERVIEW PALLETS

	System 150	System 200	System 240	System 280
	Dimensions: ø 150 and up	Dimensions: 200 x 200	Dimensions: 240 x 240	Dimensions: 280 x 280
Magnet	SAV 220.30 On request	SAV 220.30 	SAV 220.30 	SAV 220.30
Power Magnet	SAV 220.36 	SAV 220.31 On request	SAV 220.31 	SAV 220.31
Sectioned T-slot	On request	SAV 220.20 	SAV 220.20 	SAV 220.20
Screw threaded	SAV 220.15 	SAV 220.10 	SAV 220.10 	SAV 220.10
T-slot	SAV 220.25 	SAV 220.21 	SAV 220.21 	SAV 220.21
Universal	SAV 220.45 	SAV 220.40 	SAV 220.40 	SAV 220.40



ADAPTABLE TO ALL AVAILABLE REFERE



grinding



sinker EDM

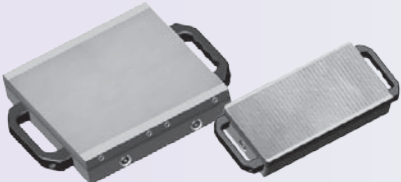
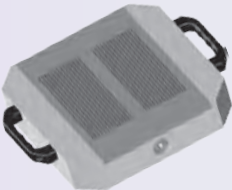
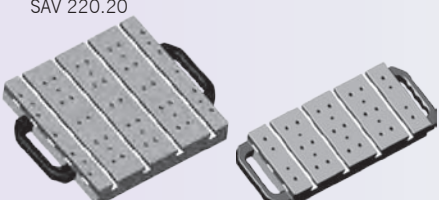


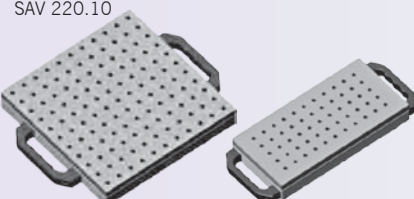
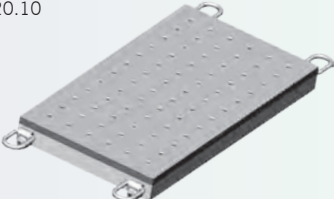

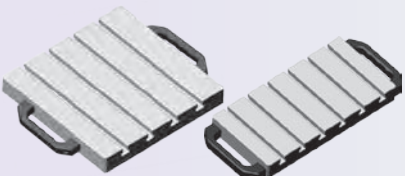







wire EDM



WORKHOLDING AND AUTOMATION

PRODUCT RANGE OVERVIEW PALLETS

System 320	System 480	System 650
Dimensions: 320 x 320 and 320 x 160	Dimensions: 480 x 280	Dimensions: 650 x 340
SAV 220.30 	SAV 220.30 On request	SAV 220.30 On request
SAV 220.31 	SAV 220.31 On request	SAV 220.31 On request
SAV 220.20 	SAV 220.20 	SAV 220.20 
SAV 220.10 	SAV 220.10 	SAV 220.10 
SAV 220.21 	SAV 220.21 	SAV 220.21 
SAV 220.40 	SAV 220.40 	SAV 220.40 



NCE SYSTEMS FOR THE APPLICATIONS:



measuring



milling



turning



WORKHOLDING AND AUTOMATION

SCREW-THREADED PALLET

SAV 220.10

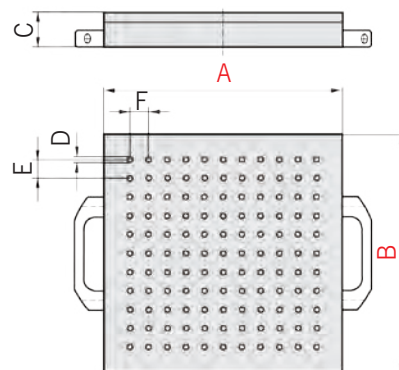
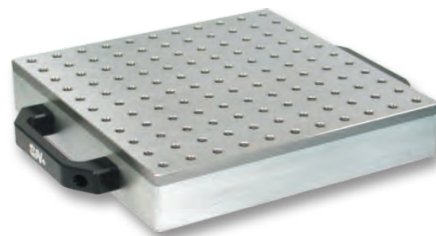
Material:

Aluminium base with screwed-on hardened and stainless steel top plate with threaded screw holes.

Application:**Technical Specifications:**

- Parallelism: < 0.02 mm
- Top plate: hardened
- Holding elements SAV 204.04 available on request (page 22)

System	Dimensions (mm)			Threaded holes (mm)	Threaded holes grid (mm)		Threaded holes	Weight (kg)
	A	B	C		D	E		
200	200	200	42	M 8	25	25	49	7.8
240	240	240	42	M 8	25	25	81	11.0
280	280	280	44	M 8	25	25	81	15.0
320	320	320	52	M 8	25	25	121	22.0
320	320	160	52	M 8	25	25	55	10.5
480	480	280	50	M 8	50	50	162	29.0
650	650	340	57	M 8	50	50	242	43.0



Ordering example: Screw threaded pallet SAV 220.10 - 320 x 320 - Reference system* - Adaptation*

Ordering key: Name SAV-No. - A x B - Reference system* - Adaptation*

SECTIONED T-SLOT PALLET

SAV 220.20

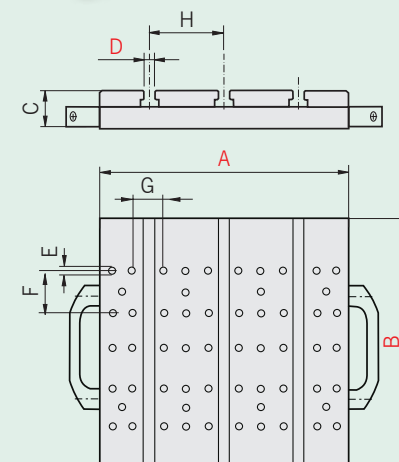
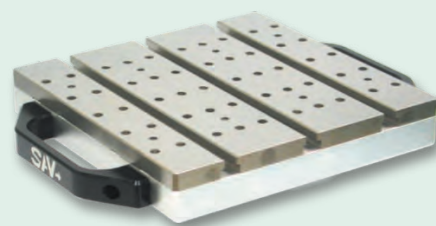
Material:

Aluminium base with screwed-on hardened and stainless steel section top plates.

Application:**Technical Specifications:**

- Parallelism: < 0.02 mm
- Top plate: section plates hardened
- Holding elements SAV 204.04 available on request (page 22)
- Threaded holes grid 50 x 50 mm (F and G)

System	Dimensions (mm)			Dimensions T-slots (mm)			Threaded holes (mm)	Threaded holes grid (mm)		T-slots grid (mm)	Sections	Weight (kg)
	A	B	C	D H8				E	F			
200	200	200	40	6	8	10	M 8	50	50	90	3	8.0
240	240	240	43	6	8	10	M 8	50	50	70	4	9.5
280	280	280	45	6	8	10	M 8	50	50	70	5	14.1
320	320	320	52	6	8	10	M 8	50	50	75	5	22.0
320	320	160	52	6	8	10	M 8	50	50	75	5	9.5
480	480	280	50	6	8	10	M 8	50	50	70	8	25.0
650	650	340	57	6	8	10	M 8	50	50	85	10	46.5



Ordering example: Sectioned T-Slot Pallet SAV 220.20 - 320 x 320 - 6 - Reference system* - Adaptation*

Ordering key: Name SAV - No. - A x B - D - Reference system* - Adaptation*

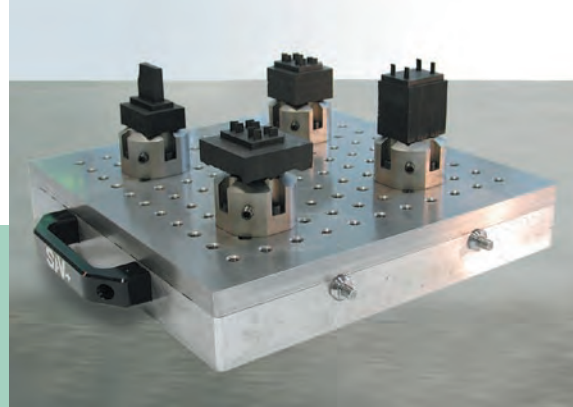
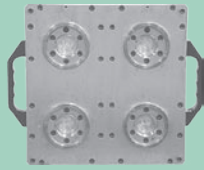


WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES

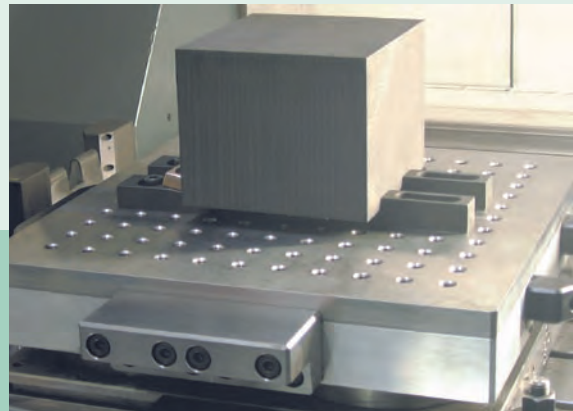
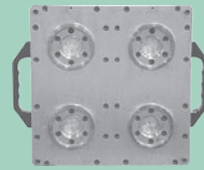
Pallet type:
Screw Threaded Pallet

SAV 220.10 - 320 x 320
Reference system*
with SAV 581.07 - UEH



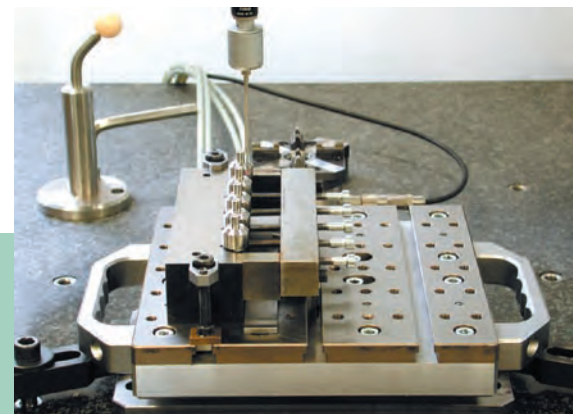
Pallet type:
Screw Threaded Pallet

SAV 220.10 - 320 x 320
Reference system*



Pallet type:
Sectioned Pallet

SAV 220.20 - 280 x 280
Reference system*



*Please specify reference system and robot adaption;
we can advise!

Pallet type:
Sectioned Pallet

SAV 220.20 - 240 x 240
Reference system*





WORKHOLDING AND AUTOMATION

T-SLOT PALLET

SAV 220.21

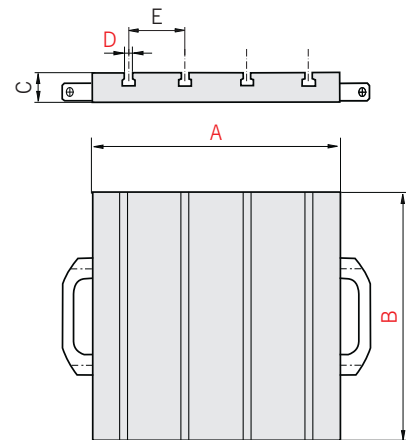
Material:

Aluminium

Application:**Technical Specifications:**

- Parallelism: < 0.02 mm
- Holding elements SAV 204.04 available on request (page 22)

System	Dimensions (mm)			Dimensions T-slots (mm)			T-slots grid (mm)	T-Slots	Weight (kg)
	A	B	C	D H8		E			
200	200	200	26	6	8	10	90	3	3.0
240	240	240	26	6	8	10	70	4	5.2
280	280	280	28	6	8	10	70	5	6.5
320	320	320	30	6	8	10	75	5	9.5
320	320	160	30	6	8	10	75	5	4.7
480	480	280	48	6	8	10	70	8	16.5
650	650	340	50	6	8	10	85	10	29.0



Ordering example: T-Slot Pallet SAV 220.21 - 320 x 320 - 6 - Reference system* - Adaptation*
 Ordering key: Name SAV - No. - A x B - D - Reference system* - Adaptation*

UNI PALLET

SAV 220.40

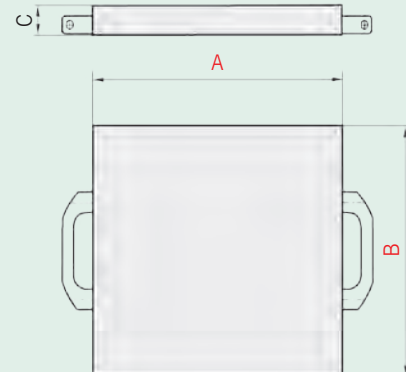
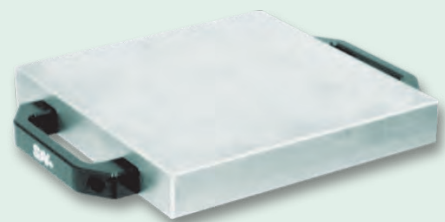
Material:

Aluminium

Application:**Technical Specifications:**

- Parallelism: < 0.02 mm
- Universal application

System	Dimensions (mm)			Weight (kg)
	A	B	C	
200	200	200	26	2.8
240	240	240	26	5.0
280	280	280	28	6.3
320	320	320	40	12.6
320	320	160	40	6.3
480	480	280	40	20.0
650	650	340	40	40.0



Ordering example: Uni Pallet SAV 220.40 - 320 x 320 - Reference system* - Adaptation*
 Ordering key: Name SAV - No. - A x B - Reference system* - Adaptation*

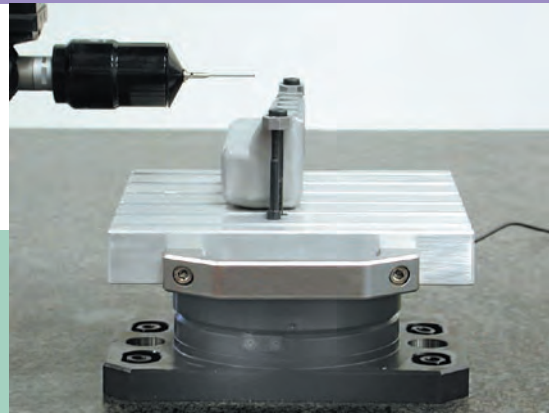
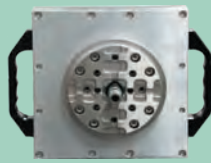


WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES

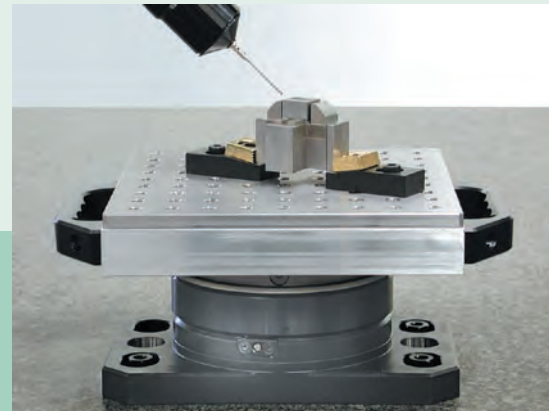
Pallet type:
T-Slot Pallet

SAV 220.21 - 240 x 240
Reference system*



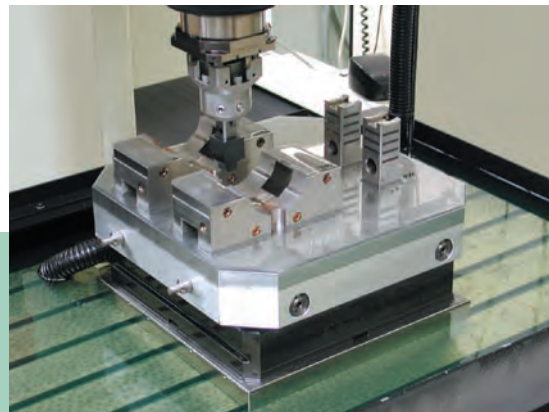
Pallet type:
Screw Threaded Pallet

SAV 220.10 - 240 x 240
Reference system*



Pallet type:
Magnet Pallet

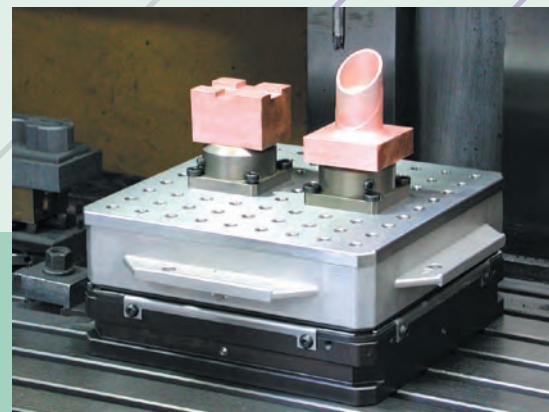
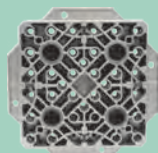
SAV 220.30 - 320 x 320
Reference system*



*Please specify reference system and robot adaption;
we can advice!

Pallet type:
Screw Threaded Pallet

SAV 220.10 - 240 x 240
Reference system*





WORKHOLDING AND AUTOMATION

MAGNET PALLET

SAV 220.30

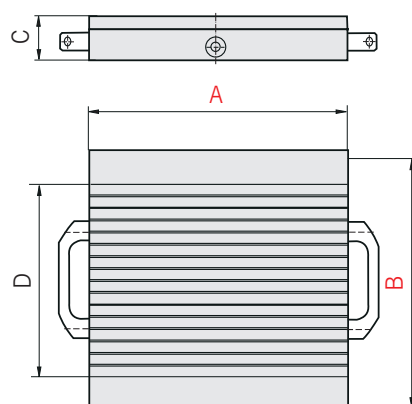
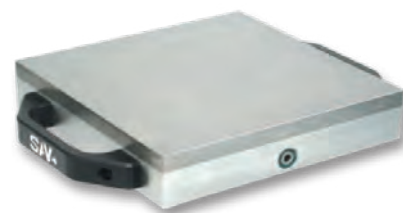
Material:

Aluminium base with St 37 /
stainless steel (V4A) Pole pate

Application:**Technical Specifications:**

- Parallelism: < 0.02 mm
- Can be executed with threaded holes for side or angled stops
- Magnetic field height: 4 mm
- Pole plate wearing limit: 3 mm
- Holding force: 80 N/cm²
- Pole pitch: 1.9 mm

System	Dimensions (mm)				Switchable sections	Weight (kg)
	A	B	C	D		
200	200	200	46	–	1	15.0
240	240	240	46	204.5	2	19.0
280	280	280	67	204.5	2	25.0
320	320	320	58	246.0	2	32.0
320	320	160	58	246.0	1	16.0



Ordering example: Magnet Pallet SAV 220.30 - 320 x 320 - Reference system* - Adaptation*
Ordering key: Name SAV-No. - A x B - Reference system* - Adaptation*

POWER MAGNET PALLET

SAV 220.31

Material:

Aluminium base with St 37 /
stainless steel (V4A) Pole plate

Application:

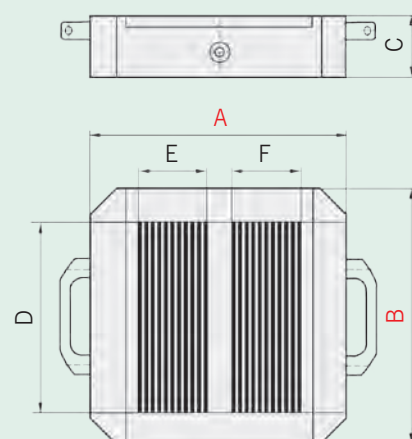
and High Speed Cutting (HSC)

Technical Specifications:

- Low weight with high holding force
- Parallelism: < 0.02 mm
- Pole plate wearing limit: 2 mm
- Holding force: 140 N/cm²
- Also available in stainless steel
- Can be executed with threaded holes for side or angled stops
- Low magnetic field height

Important:
Workpiece does not require
full magnetic surface!

System	Dimensions (mm)						Switchable sections	Weight (kg)
	A	B	C	D	E	F		
240	240	240	60	126.0	70.0	70.0	1	18.0
280	280	280	60	166.0	80.0	80.0	2	21.5
320	320	320	67	206.0	80.0	80.0	1/2	25.0



Ordering example: Power Magnet Pallet SAV 220.31 - 320 x 320 - Reference system* - Adaptation*
Ordering key: Name SAV - No - A x B - Reference system* - Adaptation*

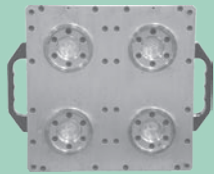


WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES

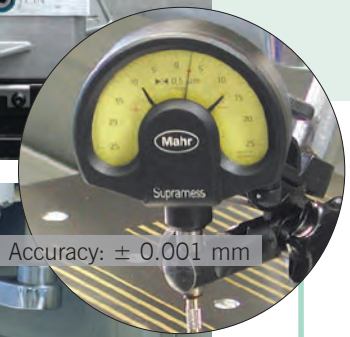
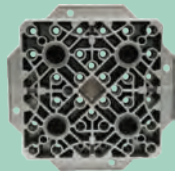
Pallet type:
Magnet Pallet

SAV 220.30 - 320 x 320
Reference system*



Pallet type:
Magnet Pallet

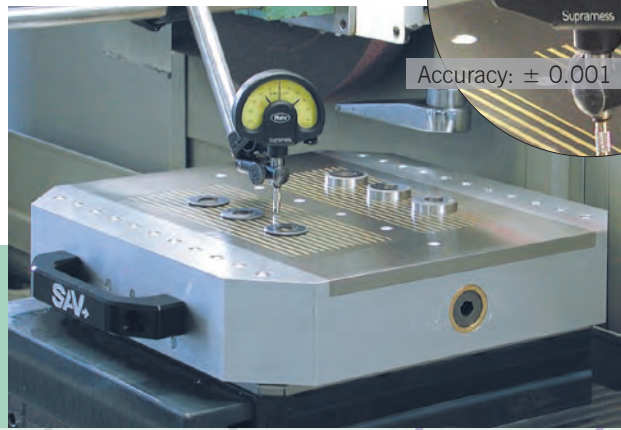
SAV 220.30 - 240 x 240
Reference system*



Accuracy: ± 0.001 mm

Pallet type:
POWER Magnet Pallet

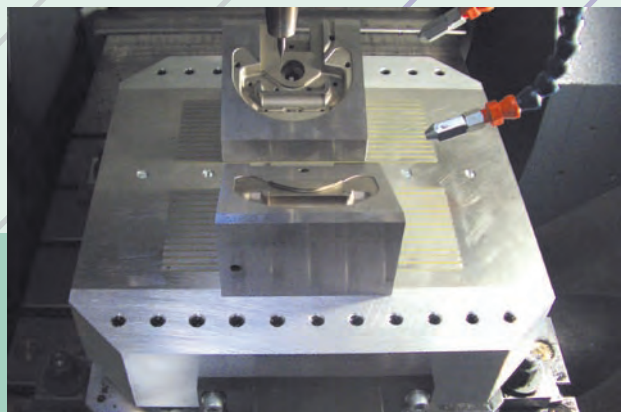
SAV 220.31 - 320 x 320
Reference system*



*Please specify reference system and robot adaption;
we can advice!

Pallet type:
POWER Magnet Pallet
for HSC-Milling

SAV 220.31 - 320 x 320
Reference system*





WORKHOLDING AND AUTOMATION

MULTI PALLET

SAV 220.50

Material:

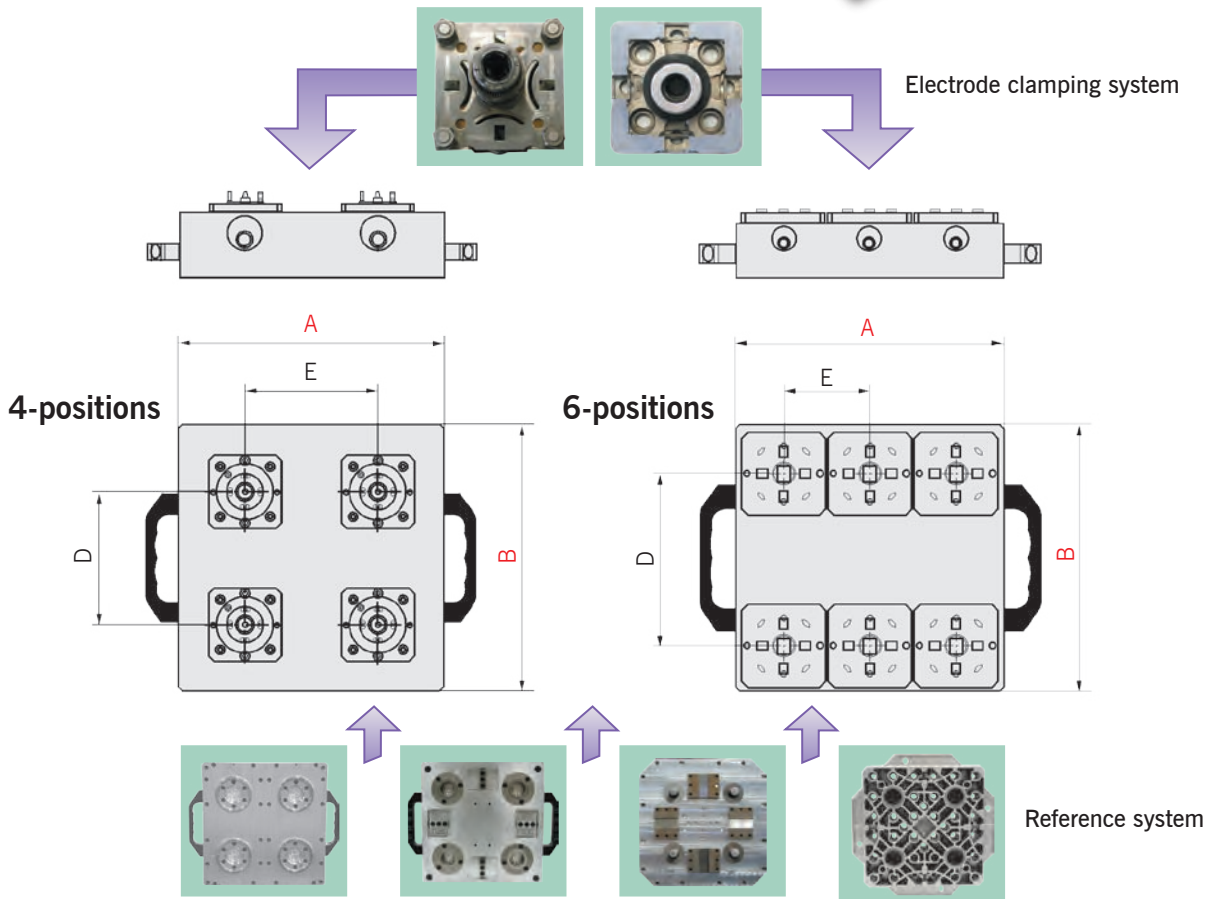
Housing out of aluminium and electrode fixtures out of stainless and hardened steel.

Application:

For milling of electrodes directly in its typical clamping fixture.

Technical Specifications:

- repeatability: 0.002 mm
- Indexing: 4 x 90°
- Holding force: 12000 N
- simple mechanical operation
- approx. 2 revolutions to lock or unlock



System	Dimensions (mm)					Weight (kg)
	A	B	C clamping positions	D	E	
240	240	240	4	140	140	15.0
280	280	280	4	180	180	17.0
320	320	320	4	180	180	19.0
280	280	280	6	180	90	26.0
320	320	320	6	180	90	28.0

Ordering example: Multi Pallet SAV 220.50 - 320 x 320 - 4 - Reference system - electrode fixture
Ordering key: Name SAV - No. - A x B - C - Reference system - electrode fixture



WORKHOLDING AND AUTOMATION

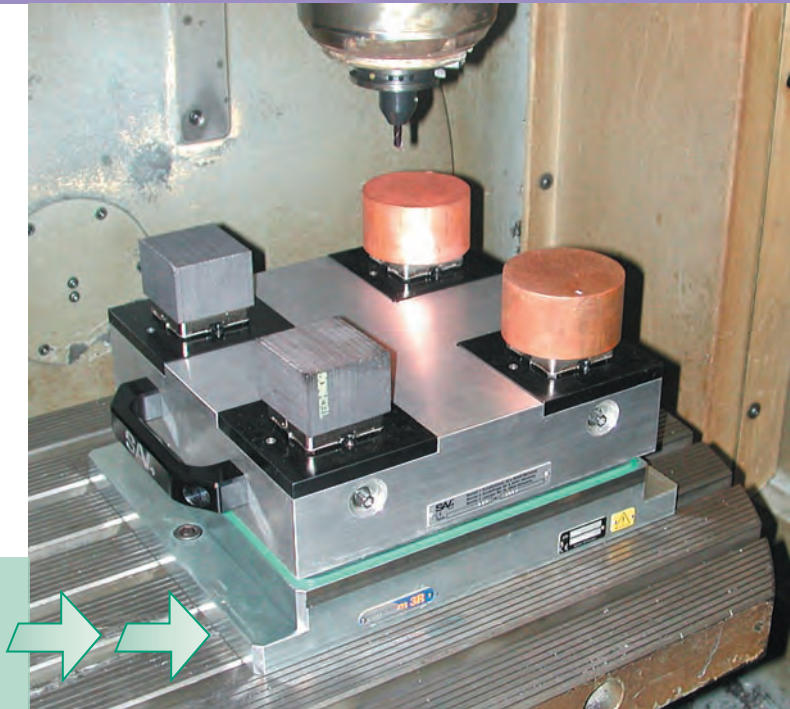
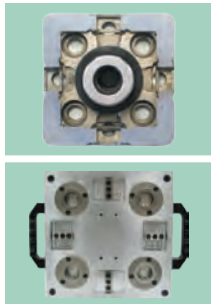
APPLICATION EXAMPLES

Special application: 4-positions fixture
Dimensions: 280 x 280 - 4

Electrode clamping system

Pallet type:
Multi Pallet

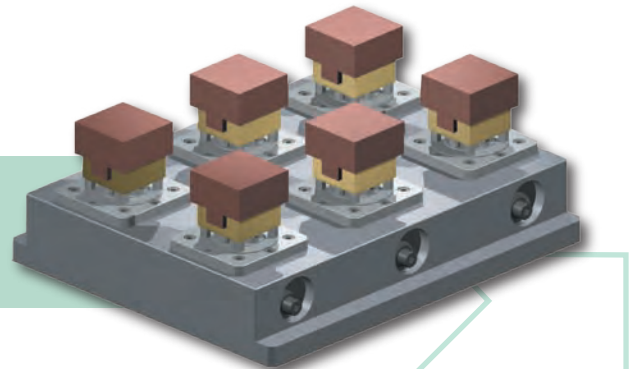
SAV 220.50 - 280 x 280
Reference system*



*Please specify reference system and adaption. We can advice!

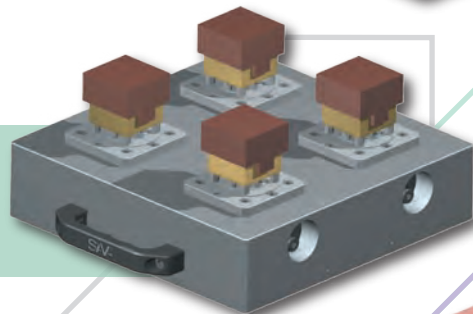
Electrode clamping system

Special application:
6-positions fixture
Dimensions: 380 x 320 - 6



Electrode clamping system

Special application:
4-positions fixture
Dimensions: 280 x 280 - 4

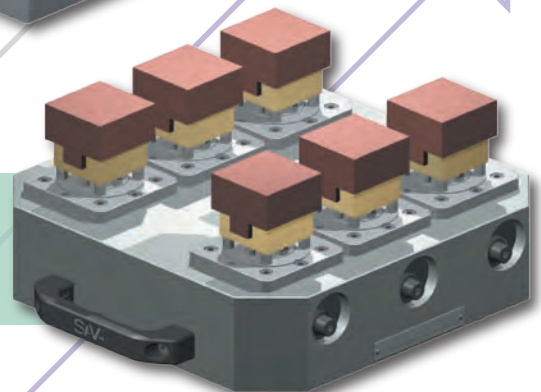


Reference system



Electrode clamping system

Special application:
6-positions fixture
Dimensions: 320 x 320 - 6



Reference system





WORKHOLDING AND AUTOMATION

SCREW THREADED CIRCULAR PALLET

SAV 220.15

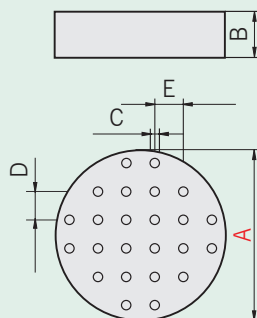
Material:

Aluminium base with screwed-on hardened and stainless steel top plate with threaded screw holes.

Application:**Technical Specifications:**

- Parallelism: < 0.02 mm
- Top plate: hardened
- Holding elements SAV 204.04 available on request (page 22)

System	Diameter (mm) A	Thickness (mm) B	Threaded holes (mm) C	Threaded holes grid (mm) D	Threaded holes grid (mm) E	Threaded holes	Weight (kg)
150	150	40	M 8	25	25	24	3.5



Ordering example: Screw Threaded Circular Pallet SAV 220.15 - 150 - Reference system*

Ordering key: Name SAV - No. - A - Reference system*

T-SLOT CIRCULAR PALLET

SAV 220.25

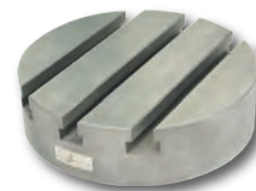
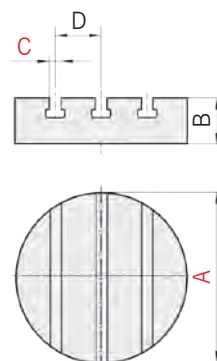
Material:

Stainless tool steel, hardened

Application:**Technical Specifications:**

- Parallelism: < 0.02 mm
- Clamping elements SAV 204.04 available on request (page 22)

System	Diameter (mm) A	Thickness (mm) B	Dimensions T-slots (mm) C H8	T-Slots	T-slots grid (mm) D	Weight (kg)
150	150	40	6	4	40	5.0



Ordering example: T-Slot Circular Pallet SAV 220.25 - 150 - 6 - Reference system*

Ordering key: Name SAV - No. - A - C - Reference system*

UNI CIRCULAR PALLET

SAV 220.45

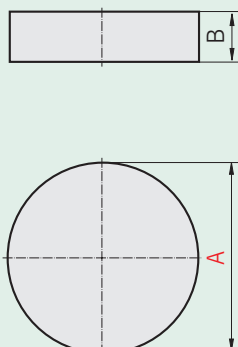
Material:

Aluminium

Application:**Technical Specifications:**

- Parallelism: < 0.02 mm
- Clamping elements available on request

System	Diameter (mm) A	Thickness (mm) B	Weight (kg)
150	150	40	1.8



Ordering example: Uni Circular Pallet SAV 220.45 - 150 - Reference system*

Ordering key: Name SAV - No. - A - Reference system*



WORKHOLDING AND AUTOMATION

ALTERNATIVE EXECUTIONS

Pallet type:
Screw-threaded Circular Pallet
SAV 220.15 - 150 - Reference system*

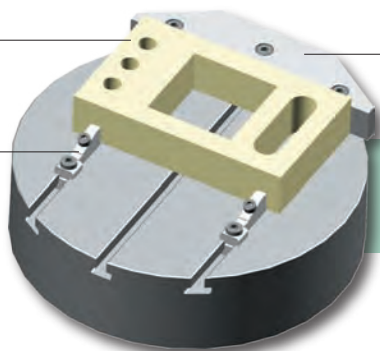


Workpiece
Excenter nut
SAV 204.39

Workpiece

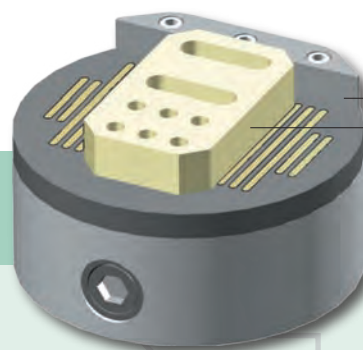
End stop

T-slot mech.
clamp, single
SAV 204.04

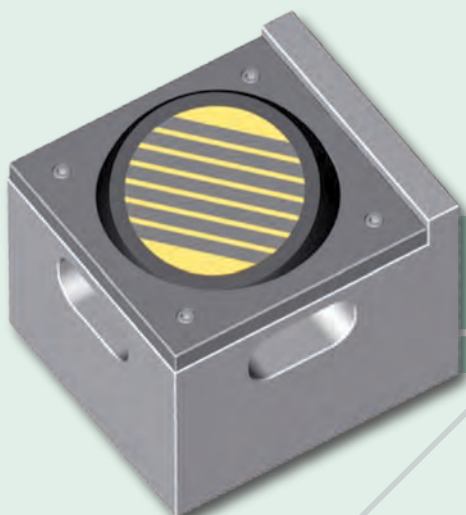


Pallet type:
T-Slot Circular Pallet
SAV 220.25 - 150 - Reference system*

Pallet type:
Magnet Circular Pallet
SAV 220.36 - 160 - Reference system*



End stop
Workpiece



Pallet Type:
Magnet Circular Pallet
SAV 220.39 - 100 integrated in swivel ball

Incl. Swiveling system – for polishing and laser welding

* Please specify reference system and robot adaption;
we can advise!



WORKHOLDING AND AUTOMATION

POWER-MAGNET CIRCULAR PALLET

SAV 220.36

Material:

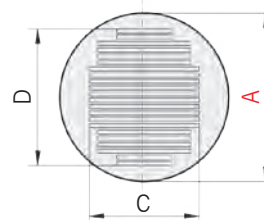
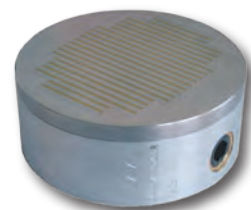
Aluminium base with St 37 /
stainless steel pole plate

Application:**Technical Specifications:**

- Holding force: 140 N/cm²
- Magnetic field height: 4 mm
- Pole plate wearing limit: 3 mm

System	Diameter (mm)	Thickness (mm)	Active Section (mm)		Weight (kg)
	A		B	C	
150	100	65	48	71	3.4
150	125	65	87	88	4.1
150	160	65	104	133	5.0
150	180	65	124	136	6.8
150	200	65	134	161	8.4
150	250	65	180	210	10.3

∅ 160
with ITS 148
+ adapter plate 9.3 kg



Ordering example: Power-Magnet Circular Pallet SAV 220.36 - 16 - Reference system*
Ordering key: Name SAV - No. - A - Reference system*

MAGNET CIRCULAR BALL PALLET

SAV 220.39

Material:

Ball hard plastic / housing aluminium

Execution of permanent magnet (PE):

- Pole plate St 37 / Brass

Execution of power magnet (PO):

- Pole plate St 37 / stainless steel (V4A)

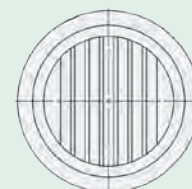
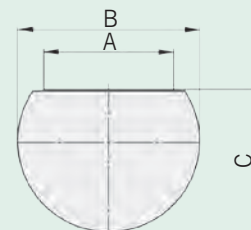
Application:

Polishing, measuring, assembling,
laserwelding.

Technical Specifications:

Optimal approach to workpiece
by setting in desired position.

System	Dimensions (mm)			Weight (kg)	Holding power (N/cm ²)	Pole pitch (mm)	Magnet field height (mm)
	A	B	C				
PE	100	140	110	3	80	11	10
PO	100	140	110	3	140	6	10



Ordering example: Magnet Circular Pallet SAV 220.39 - PE
Ordering key: Name SAV - No. - Type



WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES

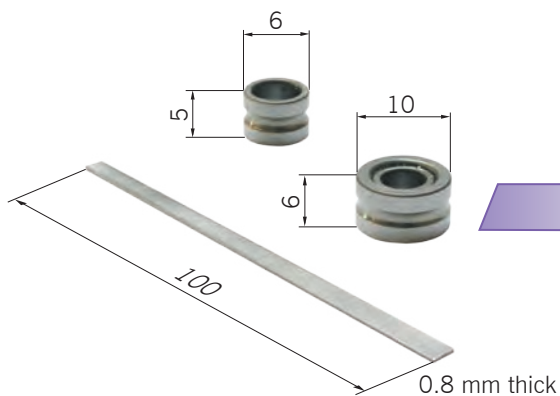


Pallet type:
Magnet circular ball pallet
SAV 220.39 PE

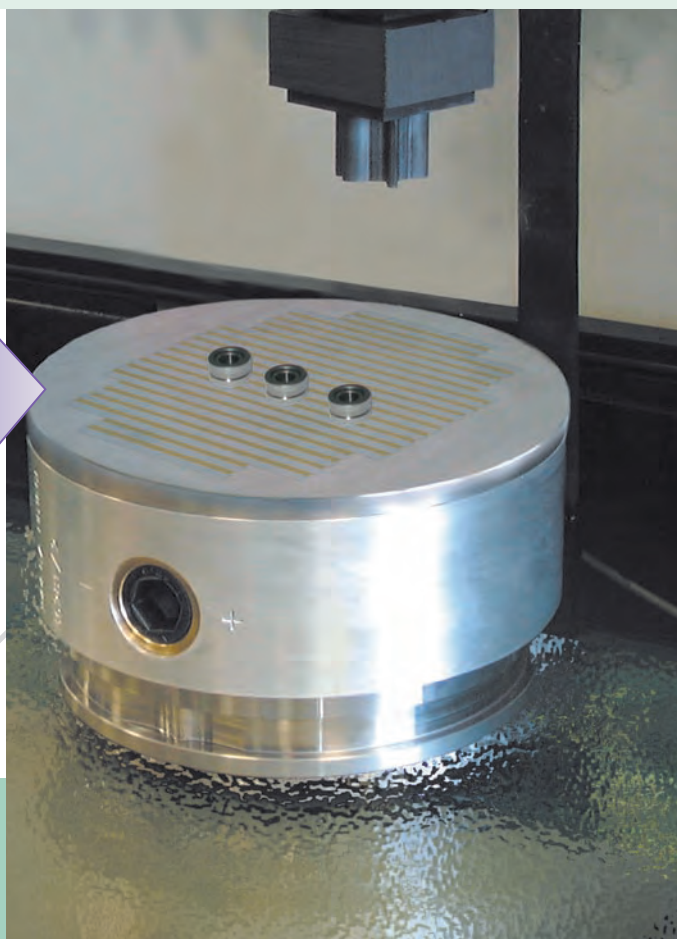


Pallet type:
Magnet circular ball pallet
SAV 220.39 PO

Also suitable for small parts



*Please specify reference system and adaption.
We can advice!



Application:
POWER Magnet Circular Pallet
SAV 220.36 - 160 - Reference system*





NEODYMIUM MAGNETIC BLOCK

SAV 242.12

Material:

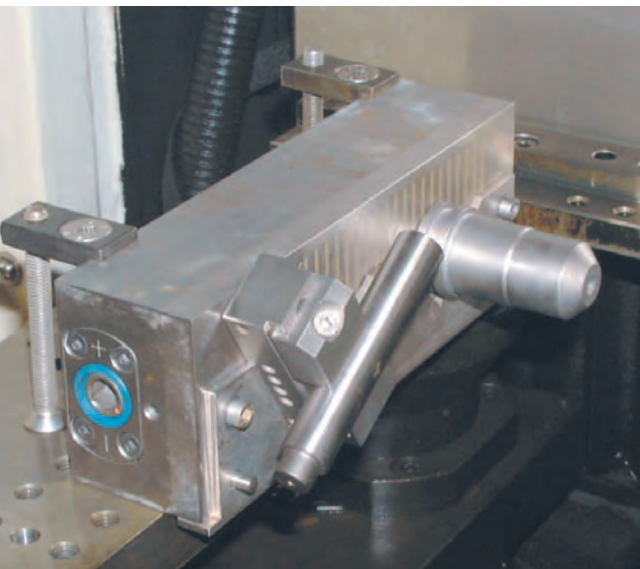
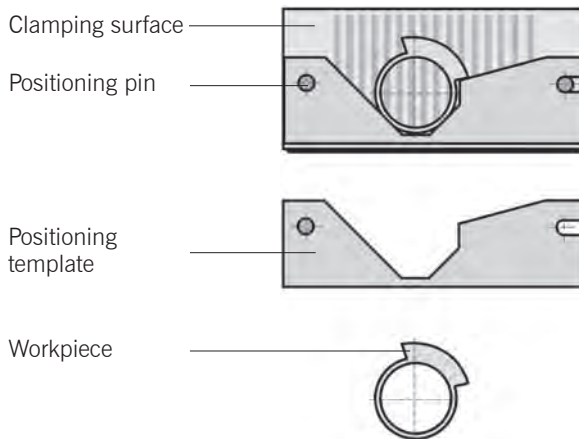
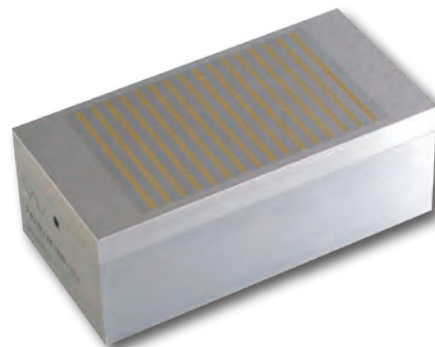
Steel base with St 37 / Brass pole plate

Application:

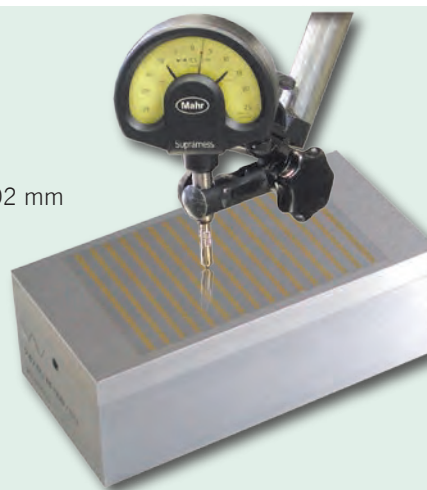


Technical Specifications:

- High pole plate stability ± 0.002 mm
- For difficult and small workpieces with complex eroding outline
- Bigger sizes available on request
- Holding force: 140 N/cm²
- Magnetic field height: approx. 10 mm
- Pole plate wearing limit: 3 mm
- Magnetic Block with (A) or without (N) adapter plate for Reference system*
- On request including Positioning Template (JS) on the clamping surface for quick and accurate workpiece positioning
- Suitable for connecting Precision Sine Guidance (S)
- Mounting of Positioning Template and Precision Sine Guidance using positioning pins with a repeatability of ± 0.003 mm
- On request the pole plate can be executed with a Z - 0 end stop (Z)



Accuracy: ± 0.002 mm



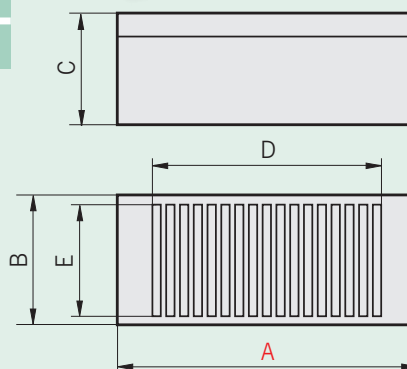
Execution:
Neodymium Magnetic Block

SAV 242.12 - ND 200 - JS

* Please specify reference system and robot adaption; we can advice!

System	Dimensions (mm)			Active Section (mm)		Weight (kg)
	A	B	C	D	E	
ND 100	140	70	49	102	64	3.4
ND 200	200	70	49	157	64	4.1

Clamping of more than 1 workpiece is possible

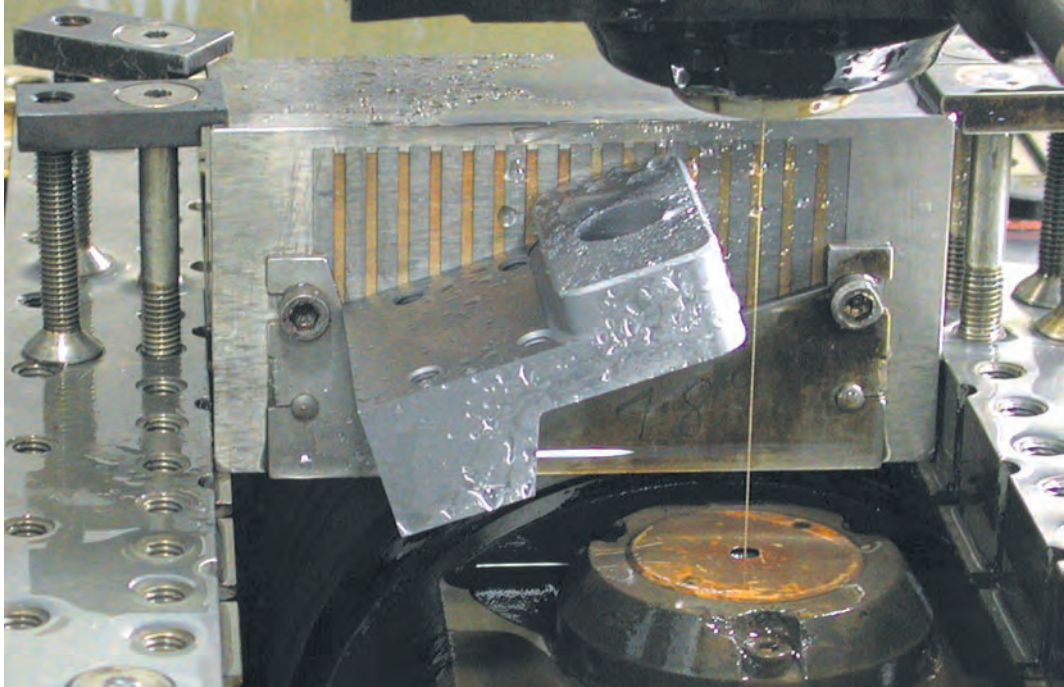


Ordering example: Neodymium Magnetic Block SAV 242.12 - ND - 200 - A - JS - Z
 Ordering key: Name SAV - No. - ND - Size - A - JS - Z



WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES



Execution:
Neodymium Magnetic Block

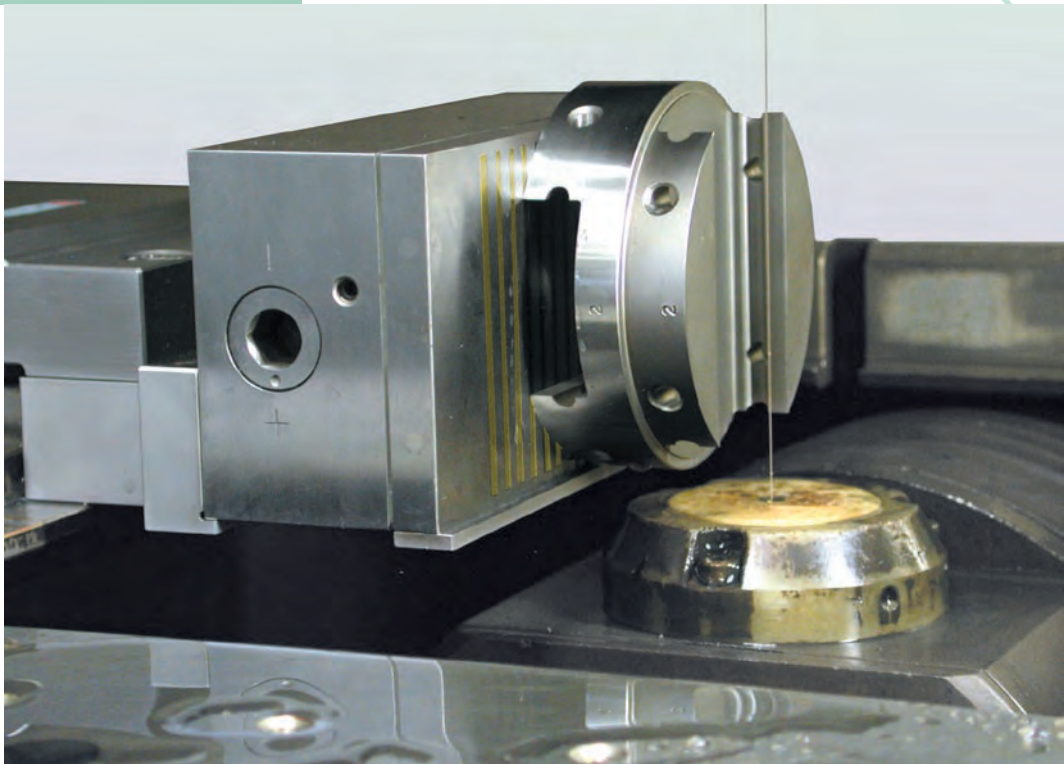
SAV 242.12 - ND 100 - JS

Application wire EDM and grinding
ND 100 with positioning template

Execution:
Neodymium Magnetic Block

SAV 242.12 - ND 100 - Z

Application wire EDM
ND 100 with Z - 0 end stop





WORKHOLDING AND AUTOMATION

PRECISION PULL DOWN VICE

SAV 231.01

Material:

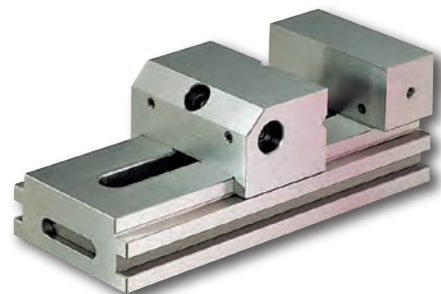
Chromium steel through hardened to HRC 58 and ground on all sides

Application:**Technical Specifications:**

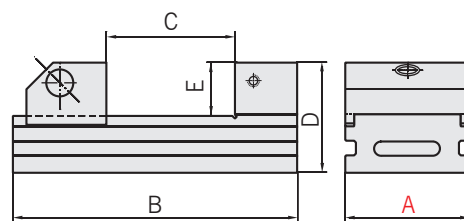
- large capacity
 - pull-down-system
 - clamp-nuts on 4 sides
 - quick adjustment
 - stainless type for A=35 and A=48
- Square-accuracy: 0.005 / 100 mm
Parallel-accuracy: 0.003 / 100 mm

Scope of supply:

- hexagon key
- wooden case optional



Dimensions in mm					Weight in kg	Wooden case optional ord.no.
A	B	C	D	E		
35	170	90	50	25	1.4	SAV 539.03
48	170	90	50	25	1.9	SAV 539.03
63	172	90	60	30	3.7	SAV 539.03
73	190	100	70	35	4.6	SAV 539.03
98	230	125	80	40	11.4	SAV 539.05
125	300	160	98	48	18.5	SAV 539.09
150	350	210	100	50	24.9	SAV 539.09



Ordering example: **Precisions Pull Down Vice SAV 231.01 - 35 - RF**

Ordering key: Name SAV - No. - A - Execution

PRECISION MINI PULL DOWN VICE

SAV 231.02

Material:

Chromium steel through hardened to HRC 55 and ground on all sides

Application:

For precision grinding and EDM applications on small workpieces. Can also be used as electrode holding device for spark erosion SAV 581.05 Type EH 25.

Technical Specifications:

- pull-down-system
- mounting threads for use as electrode holder
- stainless type on request (RF)

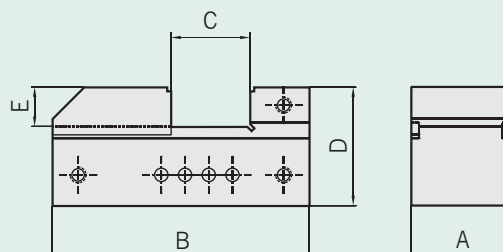
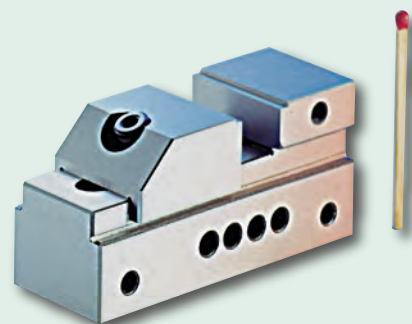
Square-accuracy: 0.005 / 100 mm

Parallel-accuracy: 0.003 / 100 mm

Scope of supply:

- hexagon key
- wooden case optional

Dimensions in mm					Weight in kg	Wooden case optional ord.no.
A	B	C	D	E		
25	65	20	30	10	0.3	SAV 539.01



Ordering example: **Precisions Mini Pull Down Vice SAV 231.02 - RF**

Ordering key: Name SAV-No. - Execution

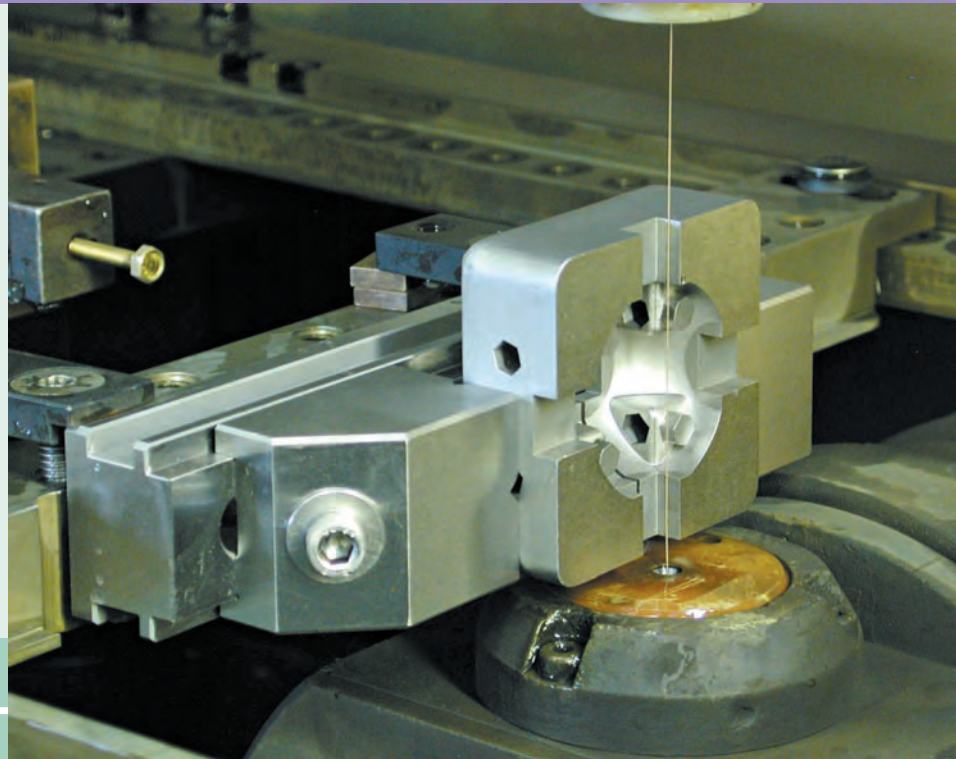


WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES

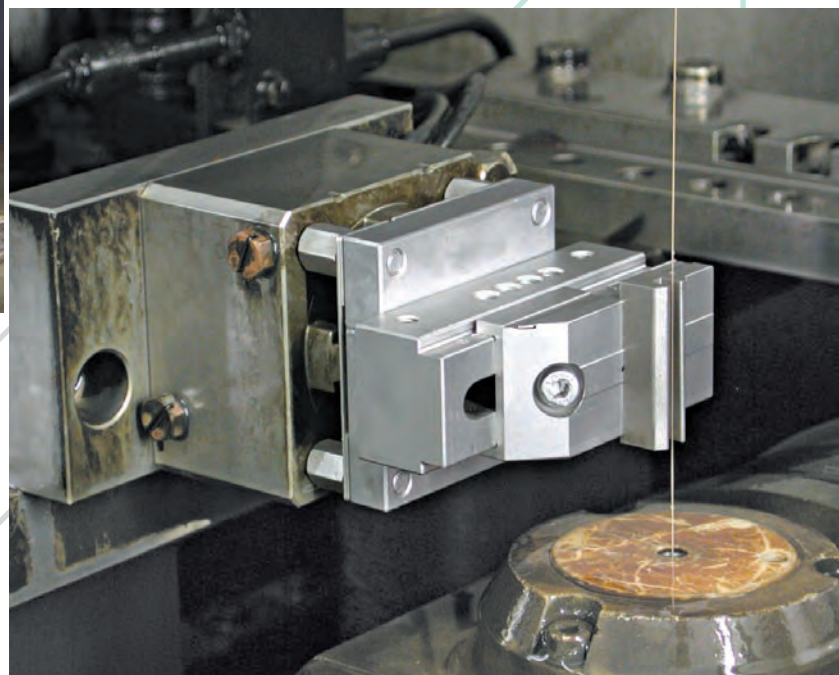
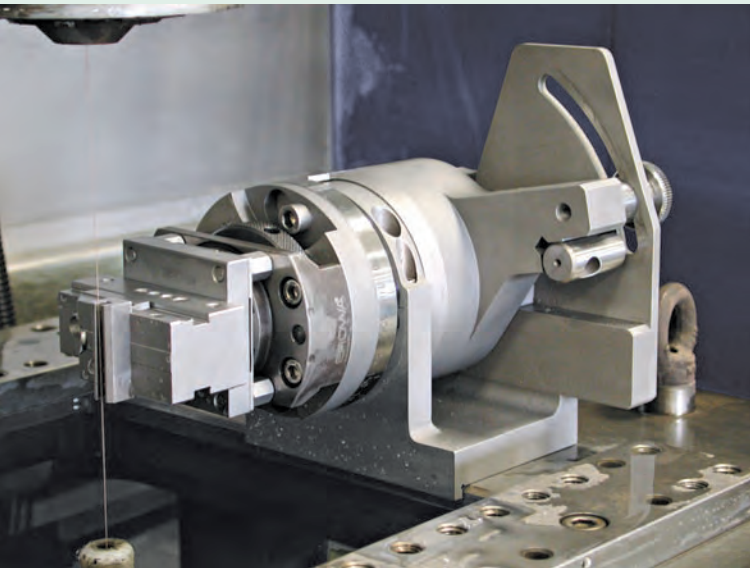
Execution:
Precision Pull Down Vice

SAV 231.01 - 35



Execution:
Precision Mini Pull Down Vice

SAV 231.02





WORKHOLDING AND AUTOMATION

T-SLOT MECHANICAL CLAMP, SINGLE

SAV 204.04

Material:

Stainless tool steel, hardened

Application:

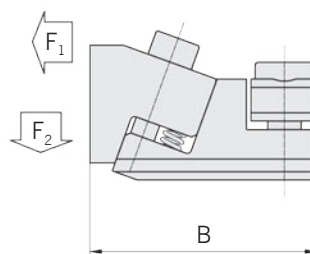
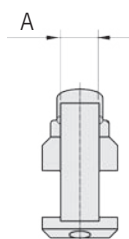
For single sideways clamping of very low workpieces for EDM

**Technical Specifications:**

Complete with nut and clamping piece



System	Width (mm)	Length (mm)	F ₁ (kN)	F ₂ (kN)	Weight (kg)
6 - E	5.6	ca. 32	2.5	0.3	0.3
8 - E	7.6	ca. 36	3.2	0.4	0.5
10 - E	9.6	ca. 40	4.0	0.5	0.7



Ordering example: T-Slot Mechanical Clamp SAV 204.04 - 10 - E

Ordering key: Name SAV-No. - System - Single

T-SLOT MECHANICAL CLAMP, DOUBLE

SAV 204.04

Material:

Stainless tool steel, hardened

Application:

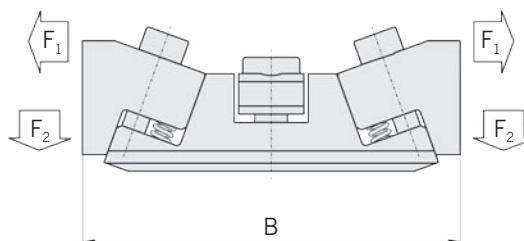
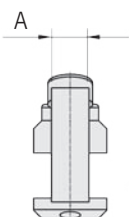
For double sideways clamping of very low workpieces for EDM

**Technical Specifications:**

Complete with nuts and clamping pieces



System	Width (mm)	Length (mm)	F ₁ (kN)	F ₂ (kN)	Weight (kg)
6 - D	5.6	ca. 50	2.5	0.3	0.5
8 - D	7.6	ca. 54	3.2	0.4	0.7
10 - D	9.6	ca. 58	4.0	0.5	0.9



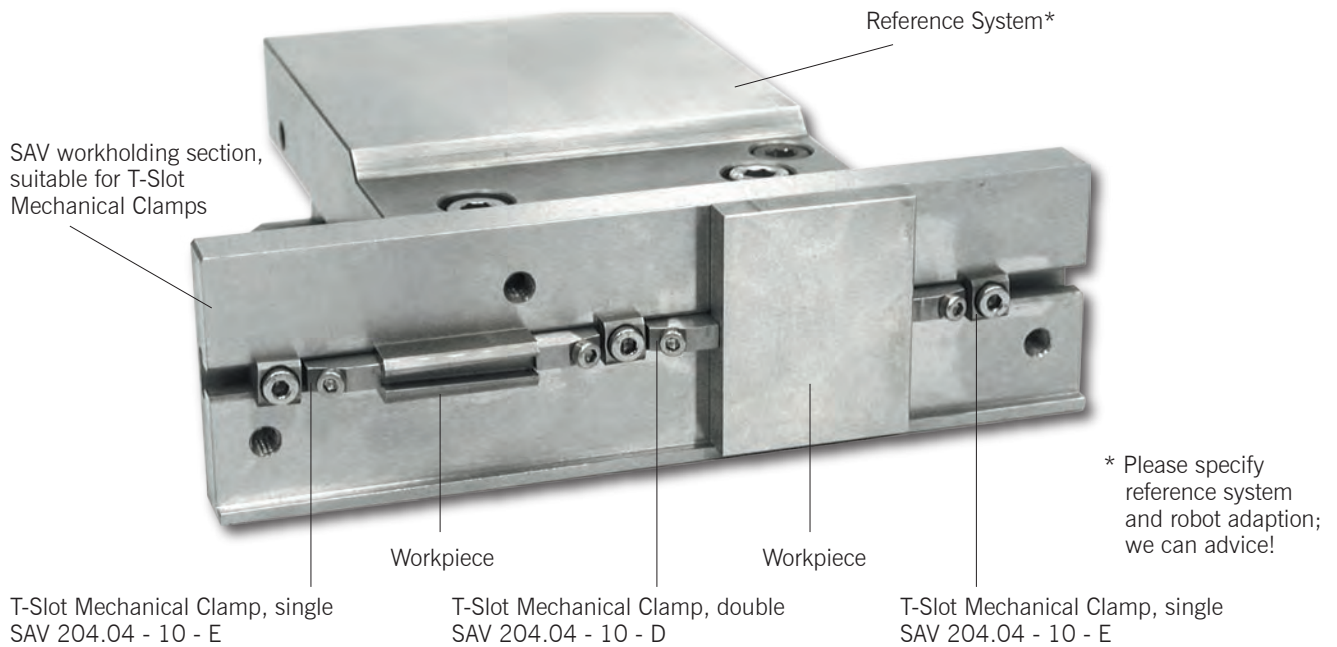
Ordering example: T-Slot Mechanical Clamp SAV 204.04 - 10 - D

Ordering key: Name SAV-No. - System - Double



WORKHOLDING AND AUTOMATION

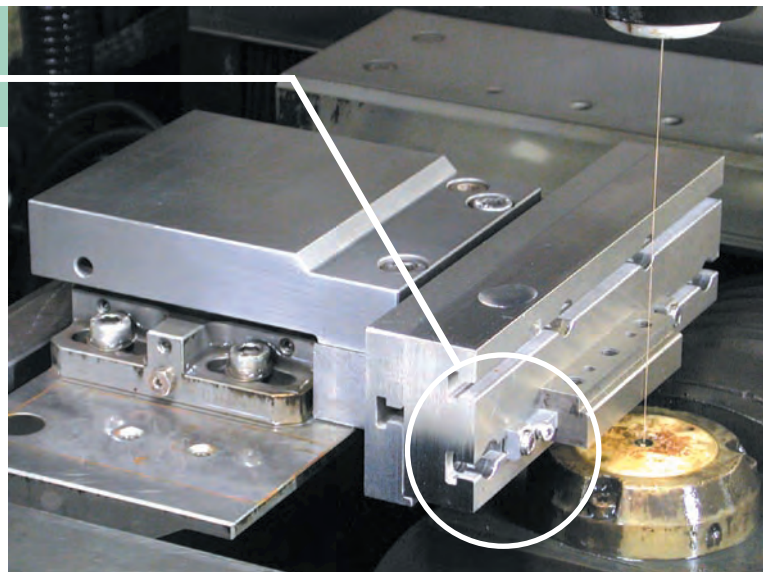
APPLICATION EXAMPLES



Execution:
T-Slot Mechanical Clamp, single

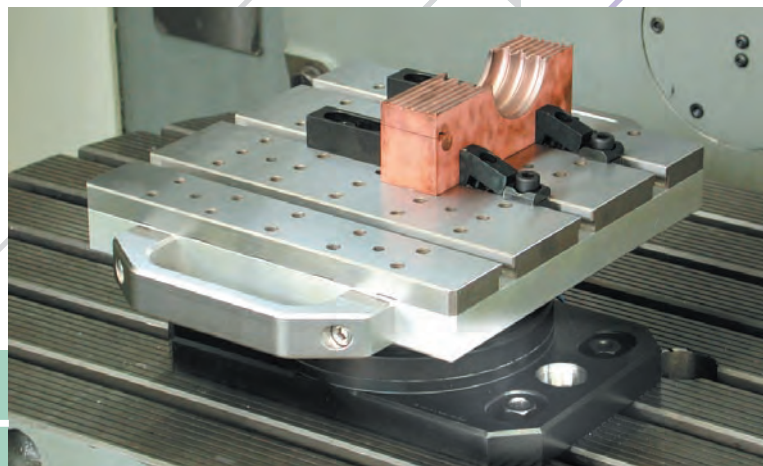
SAV 204.04 - 10 - E

Application of SAV workholding section in wire EDM



Execution:
T-Slot Mechanical Clamp, single

SAV 204.04 - 10 - E





WORKHOLDING AND AUTOMATION

PRECISION 3-JAW-CHUCK

SAV 260.11

Material:

Stainless steel, jaws and chuck hardened

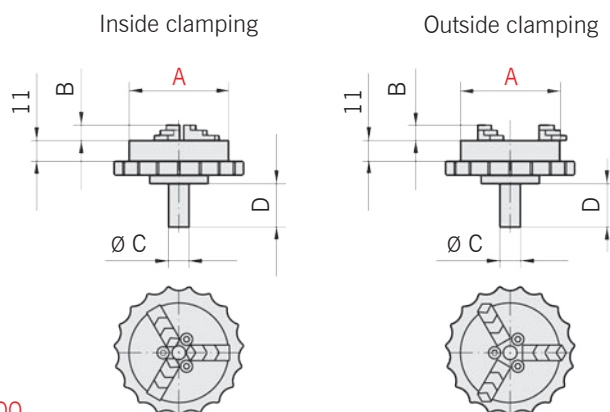
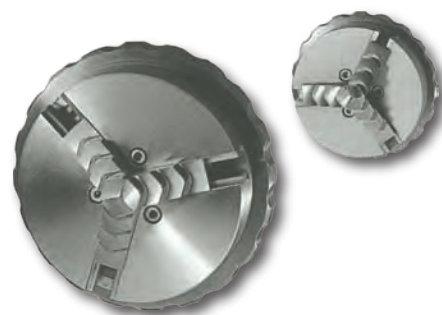
Application:**Technical Specifications:**

- Precision ground
- High rotation accuracy and repeatability at low holding force
- Rotation accuracy with testing pin of 10 mm diameter; < 0.03 mm
- Suitable for thin ring shaped workpieces
- Workpiece clamping by manual rotation of the setting ring, without key
- Clamping repeatability < 0.005 mm
- When ordering replacement Jaws, these will be supplied in pre-manufactured accuracy.

Dimensions (mm)				Clamping range (mm)		Weight (kg)
A	B	C	D	Inside clamping	Outside clamping	
58	9	12	25.0	min. 0.5 max. 10	min. 16 max. 49	0.25
100	9	18	37.5	min. 1.0 max. 29	min. 21 max. 86	

Ordering example: Precision 3-Jaw-Chuck SAV 260.11 - 100

Ordering key: Name SAV - No. - Diameter



HOLDING BLOCK

SAV 260.11 - B

Material:

Compact holding block made of stainless steel, precision ground and with hardened surfaces.

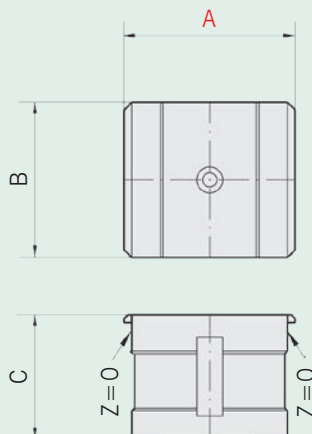
Application:

- Used on EDM frames and for grinding

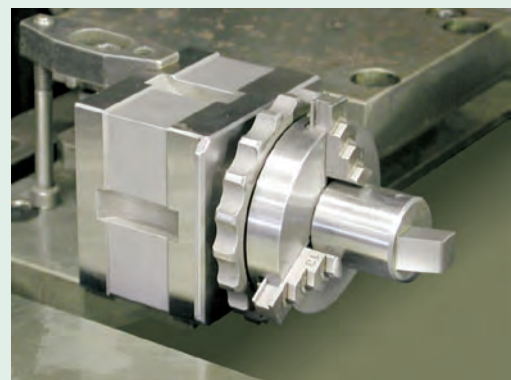
Technical Specifications:

- Clamping repeatability < 0.05 mm
- Can be used in combination with Precision 3-Jaw-Chuck SAV 260.11 sizes 58 and 100

Dimensions (mm)			Weight (kg)
A	B	C	
58	58	48	1.2
100	100	65	4.8



Execution:
Holding block SAV 260.11 - B
with Precision 3-Jaw-Chuck SAV 260.11



Ordering example: Holding Block SAV 260.11 - B - 100

Ordering key: Name SAV - No. - B - Execution



WORKHOLDING AND AUTOMATION

ELECTRODE UNI FIXTURE

SAV 581.07 – UEH

Material:

Stainless tool steel, hardened

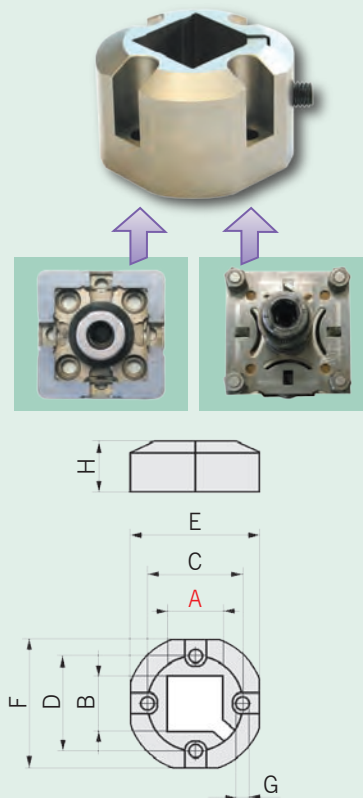
Application:

For EDM and milling of electrodes or other square slotted workpieces

Technical Specifications:

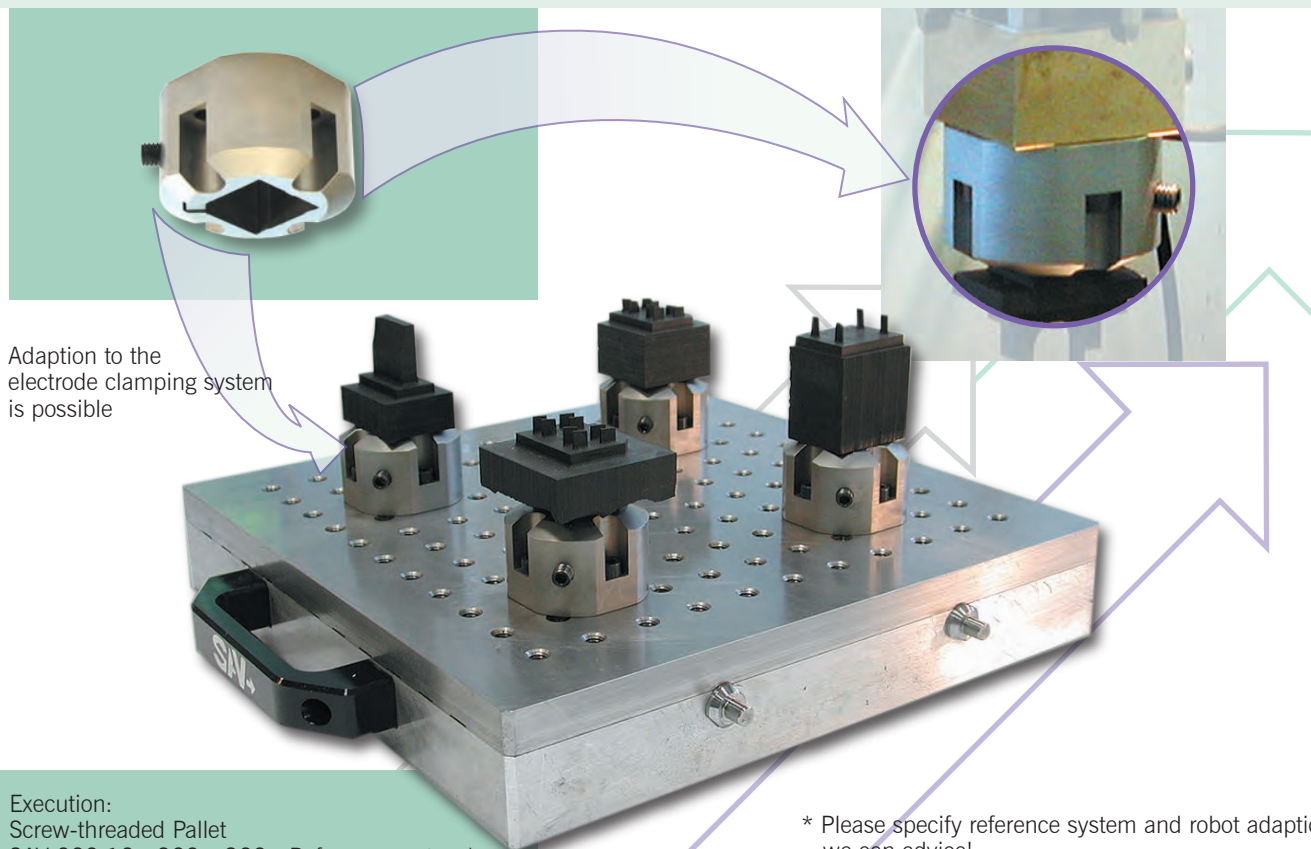
- On request adjusted to your reference system
- Suitable for mounting on multiple-pallets and single mounting

Dimensions (mm)								Weight (kg)
A	B	C	D	E	F	G	H	
15	15	43	43	27	27	∅ 6.6	36	0.40
25	25	43	43	27	27	∅ 6.6	36	0.45



Ordering example: **Electrode Uni Fixture SAV 581.07 - UEH - 15**

Ordering key: Name SAV - No. - Type - A



Adaption to the electrode clamping system is possible

Execution:
Screw-threaded Pallet
SAV 220.10 - 320 x 320 - Reference system*
Electrode Uni Fixture
SAV 581.07- UEH - A

* Please specify reference system and robot adaption; we can advice!



WORKHOLDING AND AUTOMATION

COLLET ELECTRODE FIXTURE

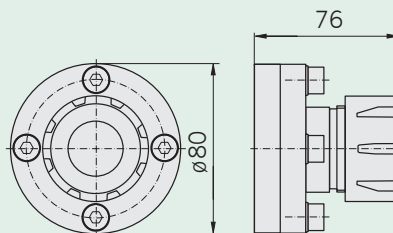
SAV 581.07 – ZEH

Material:

Stainless tool steel, hardened

Application:**Technical Specifications:**

- Collet fixture with adapter flange and reference system aligned
- Collet fixture suitable for collet SAV 439.67-470E or exchange set SAV 581.07-WS
- Supplied with cone for chuck type Schaublin No. 470E according DIN 6499 shape ER32
- Supplied with adapter flange diameter 80 mm aligned



Ordering example: Collect Electrode Fixture SAV 581.07 - ZEH

Ordering key: Name SAV-No. - Type

ELECTRODE FIXTURE

SAV 581.07 – WEH

Material:

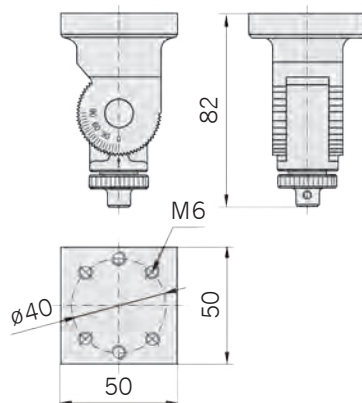
Stainless tool steel, hardened

Application:

Adaption with fixture to the machining head for spark erosion.

Technical Specifications:

- Supplied either with or without sine function
- Supplied including exchange set SAV 581.07 - W, excluding collet



Ordering example: Electrode Fixture SAV 581.07 - WEH

Ordering key: Name SAV-No. - Type

COLLET

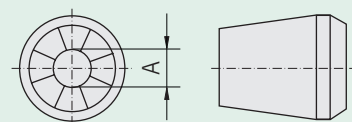
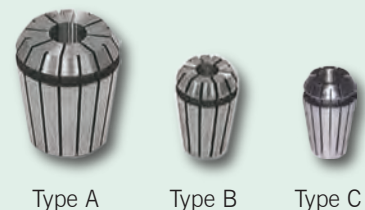
SAV 439.67

Material:

Stainless tool steel, hardened

Technical Specifications:

- Double cone collet supplied with Schaublin System / Regofix according DIN 6499
- Type A: Form 470 E
Clamping range from diam. 4.0 to 20.0 mm in 1.0 mm steps
Clamping range from diam. 2.0 to 3.0 mm in 0.5 mm steps
- Type B: Form 426 E
Clamping range from diam. 4.0 to 10.0 mm in 1.0 mm steps
Clamping range from diam. 2.0 to 3.0 mm in 0.5 mm steps
- Type C: Form 4008 E
Clamping range from diam. 4.0 to 7.0 mm in 1.0 mm steps
Clamping range from diam. 2.0 to 3.0 mm in 0.5 mm steps
- Collets can be supplied as set, from diameter 3.0 mm to 18.0 mm



Ordering example: Collet SAV 439.67 - 470 E - Set

Ordering key: Name SAV-No. - Type or Set



WORKHOLDING AND AUTOMATION

ADAPTER FLANGE

SAV 581.07 – FA

Material:

Stainless tool steel, hardened

* Please specify reference system and robot adaption; we can advice!

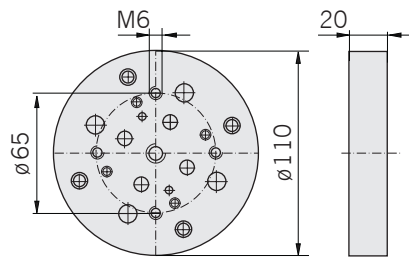
Application:



light milling

Technical Specifications:

- Adapter between machine and fixture
- For mounting of collet-electrode-fixture SAV 581.07 - ZEH on bigger sized reference systems*
- System adaptation required



Ordering example: Adapter Flange SAV 581.07 - FA - Reference system*
Ordering key: Name SAV - No. - Type - Reference system*

EXCHANGE SET

SAV 581.07 – W

Material:

Stainless tool steel, hardened

Application:



light milling

Technical Specifications:

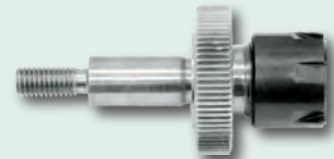
- Exchange set connects collet-electrode-fixture SAV 581.07 - ZEH and electrode fixture SAV 581.07 - WEH
- Supplied with collet holder, excluding collet

Execution	Chuck	A (mm)	Clamping range (mm)
A	4008 E	50	1.0 - 7.0
B	426 E	56	1.0 - 10.0

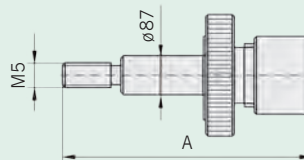
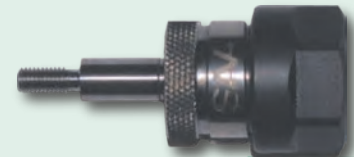
Ordering example: Exchange Set SAV 581.07 - W - A

Ordering key: Name SAV - No. - Execution

Execution A



Execution B



GASKET

SAV 581.07 – DS

Material:

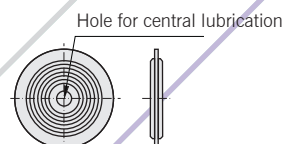
Aluminium / Plastic

Application:



Technical Specifications:

To seal the connection between adapter flange SAV 581.07 - FA and the collet-electrode-fixture SAV 581.07 - ZEH on machines with central lubrication.



Ordering example: Gasket SAV 581.07 - DS
Ordering key: Name SAV - No. - Type



WORKHOLDING AND AUTOMATION

SET ELECTRODE FIXTURES

SAV 581.07 – SET

Technical Specifications:

- Set is supplied in 2 basic variants
- The variants differ in the reference system*, the clamping range of the collets and the exchange set
- Set is supplied in wooden case, c.w. collet key
- Suitable for exchange set 581.07-W

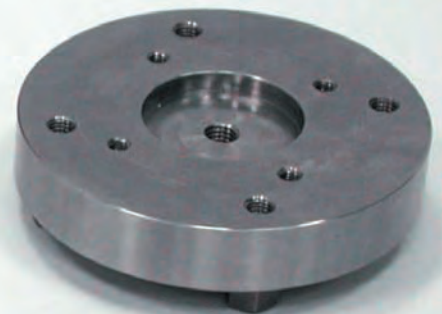
Collet

Clamping range (mm)	Number of	Type	Execution
4.0	1	4008 E	A
6.0	1	4008 E	A
3.0	1	470 E	
5.0	1	470 E	
6.0	1	470 E	
8.0	2	470 E	
10.0	1	470 E	
12.0	1	470 E	
16.0	1	470 E	
8.0	1	426 E	B



Ordering example: SAV 581.07 - Set - Reference system*

Ordering key: SAV - No.- Execution - Reference system*

Electrode fixture
SAV 581.07 - WEHSET Electrode fixtures
SAV 581.07 - SetCollet-electrode-fixture
SAV 581.07 - ZEHAdapter flange
Reference system*
SAV 581.07 - FAExchange set
SAV 581.07 - W (execution A)Collet
SAV 439.67 - AExchange set
SAV 581.07 - W (execution B)Gasket for central
lubrication at Z-axis
SAV 581.07 - DSCollet
SAV 439.67 - BMounting bolt
with gasketCollet key
SAV 581.07 - SCollet
SAV 439.67 - C



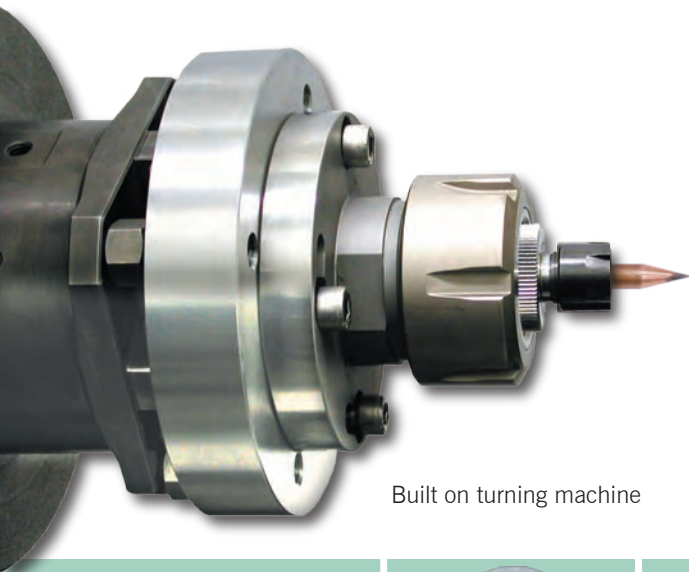
WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES

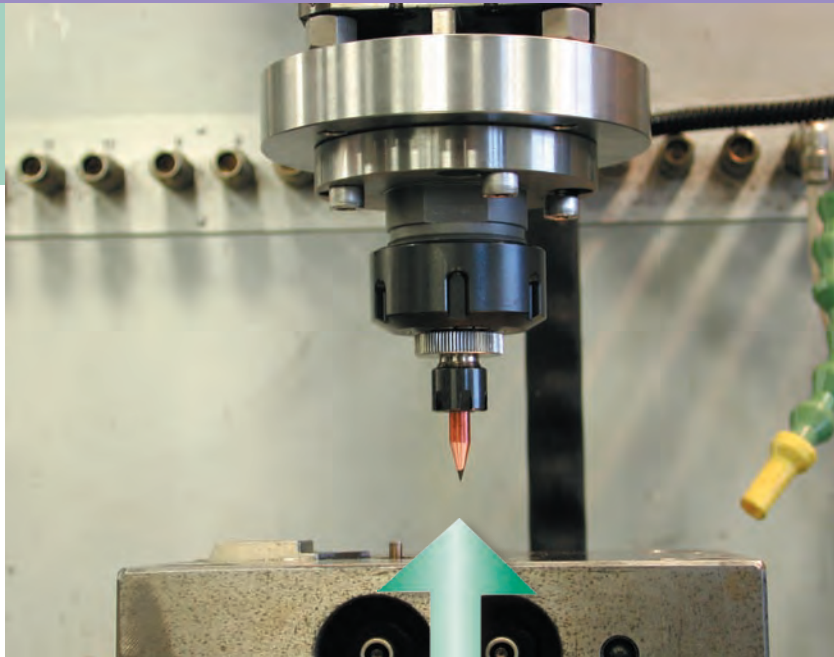
Execution:
Collet fixture
SAV 581.07 - ZEH
With exchange set
SAV 581.07 - W - A



* Please specify reference system and robot adaption;
we can advise!



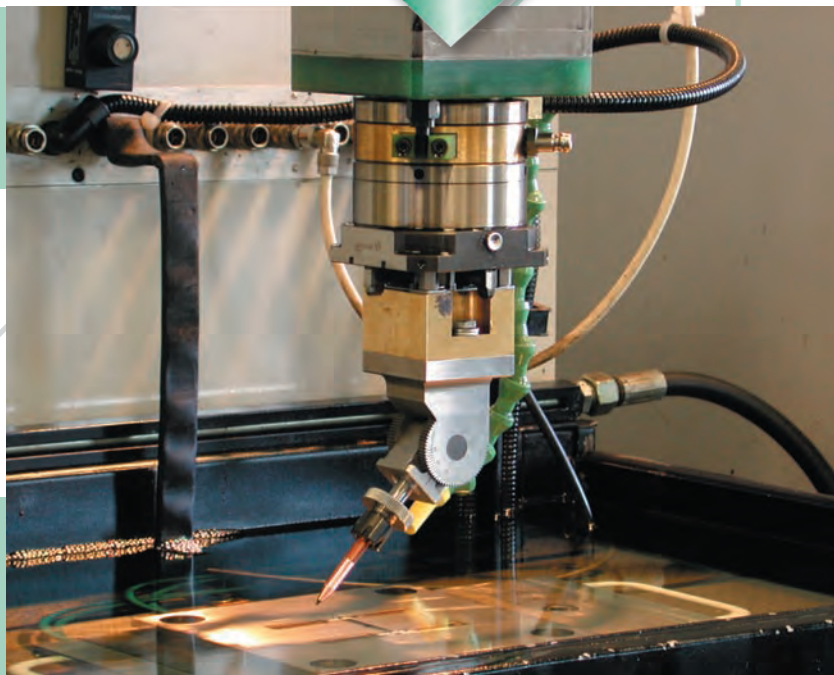
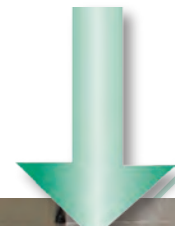
Built on turning machine



Application sinker EDM



Exchange set
SAV 581.07 - W



Application sinker EDM

Execution:
Collet fixture
SAV 581.07 - ZEH
With exchange set
SAV 581.07 - W - A



Execution:
Electrode fixture
SAV 581.07 - WEH
with exchange set
SAV 581.07 - W - A
and round electrode





WORKHOLDING AND AUTOMATION

PRECISION ROTARY INDEXER

SAV 434.50

Material:

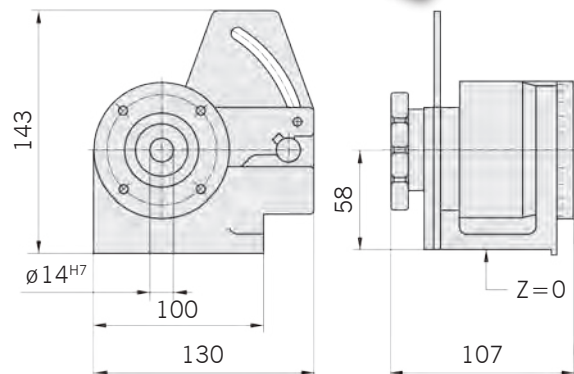
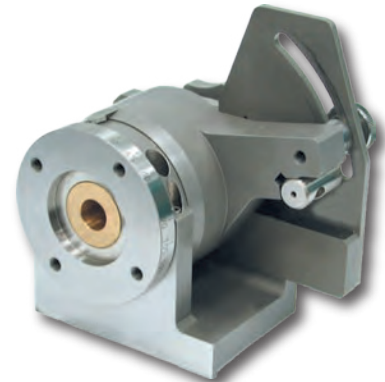
Stainless tool steel, precision ground

Application:



Technical Specifications:

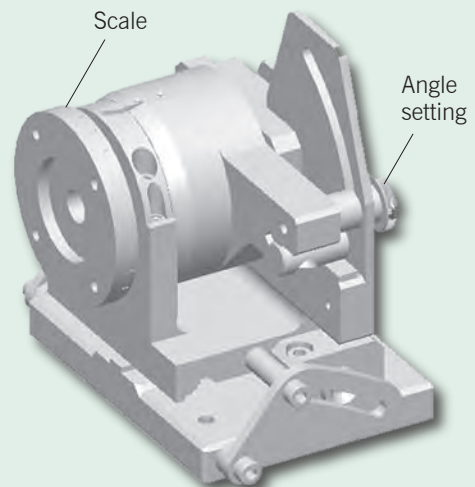
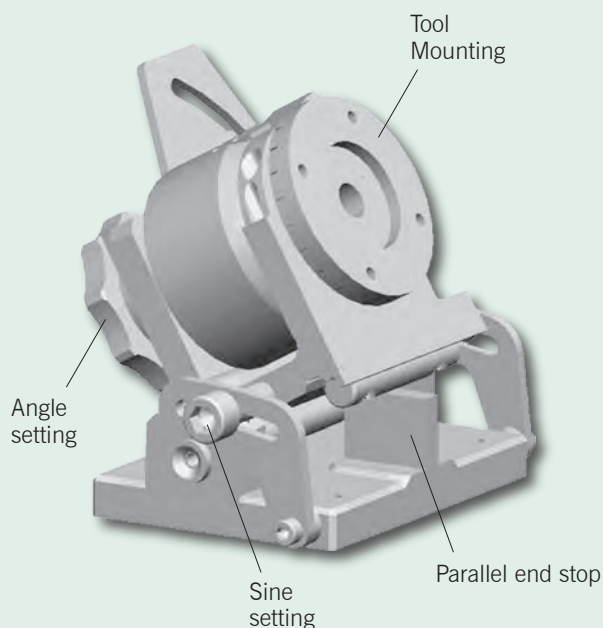
- Setting accuracy ± 20 sec.
- High accuracy requirement at small holding force
- Centered clamping of workpieces
- Angle setting through 15° Hirth-toothing
- Setting steps according sine-principle up to 45° angle
- Clamping tools are to be ordered together with rotary indexer to ensure proper adaptation
- Rotary indexer is supplied without mounting holes for base plate, these can be supplied on request*



Ordering example: Precision Rotary Indexer SAV - 434.50

Ordering key: Name SAV - No.

ALTERNATIVE EXECUTIONS



Execution:
Precision rotary indexer with sine table
up to 45° angle

SAV 434.50 - Special execution

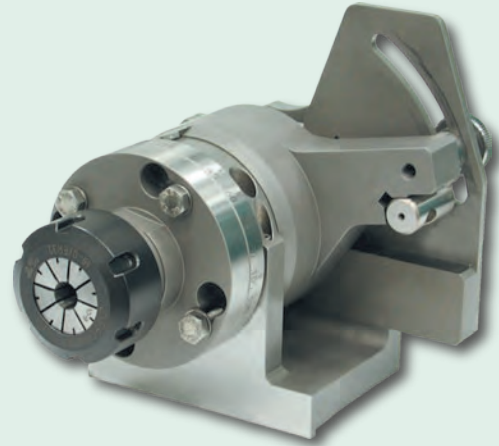
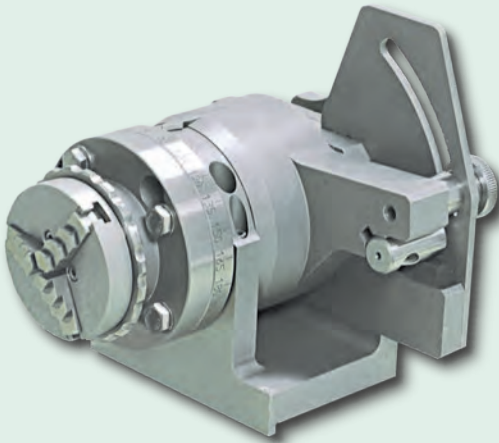


WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES

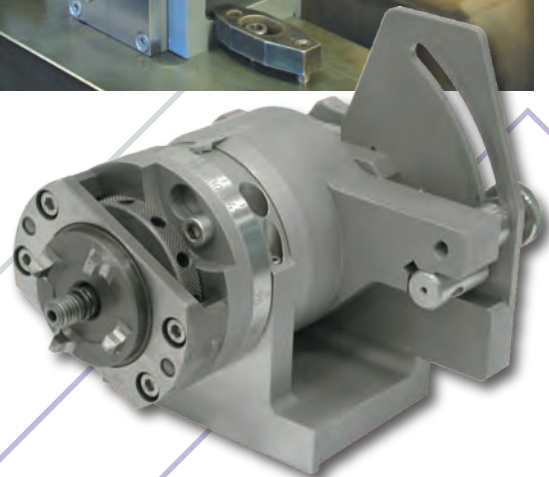
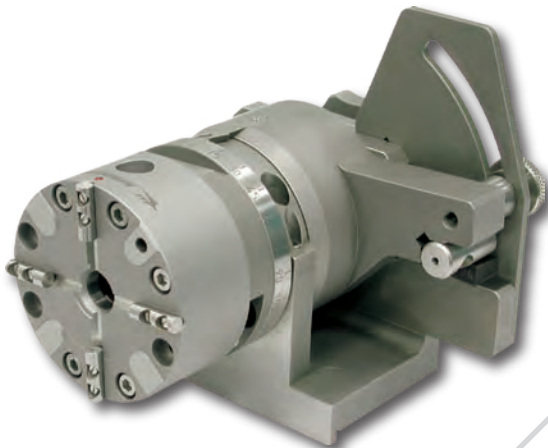
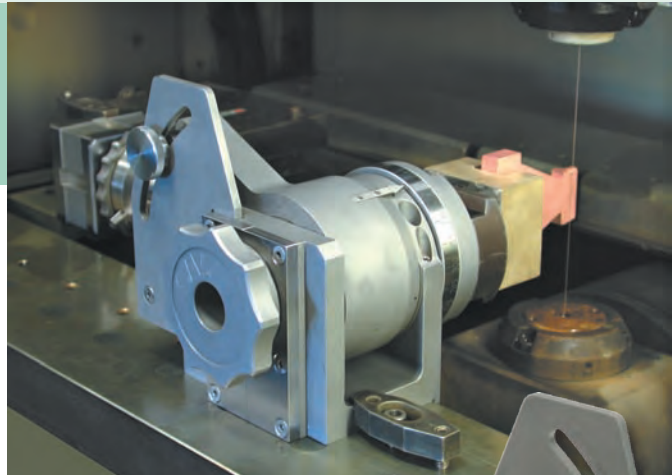
SAV 434.50

Execution:
Precision Rotary Indexer
SAV 434.50
with 3-Jaw-Chuck
SAV 260.11 - 58



Execution:
Precision Rotary Indexer
SAV 434.50
with Collet fixture excl. flange

Execution:
Precision Rotary Indexer
SAV 434.50
with reference chuck



Execution:
Precision Rotary Indexer
SAV 434.50
with reference chuck





NC ROTARY INDEXER

SAV 434.51

Application:

Positioning of workpieces along horizontal axle.
Maximum workpiece weight 30 kg dynamic or
50 kg when equipped with counter bearing.

**Optional:**

Completely enclosed housing which can be
used in corrosive environment (e.g. wire EDM)

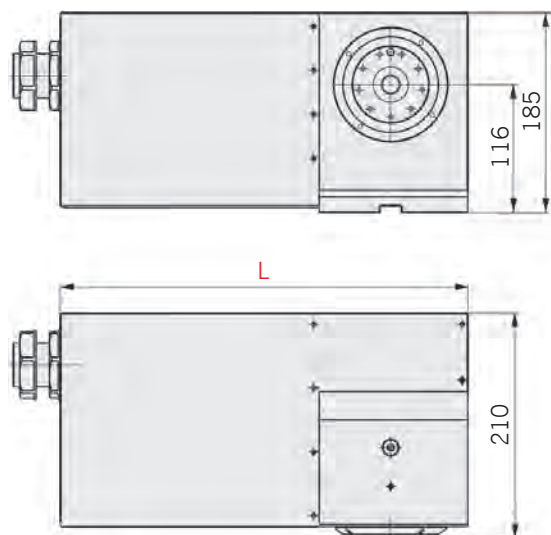
Product description:

Compact Rotary Indexer with double bearing
spindle. Hydraulically clamped precision worm
gear and flanged servo motor. Indexing measur-
ing system either on servo motor (indirect
system) or ring shaped directly on the spindle.
Execution of the spindle flange for mounting
to the workpiece on customer specification
(e.g. for manual clamping with HSK or Jaw-
adaption or adaptor for automatic zero-refer-
ence-system).

Available with Direct Drive on request.

Control:

The NC Rotary Indexer is available in either a
self contained variant with its own SAV control
with touch panel and programmable inter-
face to the machine, or as customer specific
additional axle (round axle optional), modified
to the specific machine hard- and software.

**Technical Specifications:**

NC - Rotary Indexer	Standard with SAV control	Optional round axle		
		SIEMENS	Heidenhain	Infranor
Length (mm)	350	490	380	480
Electical supply	3 x 400 VAC , 16 A	M a c h i n e s p e c i f i c		
Motor Type	HDD/ICM b	1FT6041	QSY 96C	BLS072

Width:	210 mm
Height:	185 mm
Spindle height:	116 mm
Max. workpiece weight:	30 kg
(50 kg with counter bearing)	
Dead weight:	35 kg
Max. perm. Axial force:	20,000 N
Torque:	280 Nm
Clamping force:	340 Nm
Max. revolutions	46 rpm

Positioning accuracy:	arcsec
Setting accuracy, standard:	± 10
improved:	± 2.5
Repeatability:	± 2.0
Geometry:	mm
- concentricity, standard:	0.010
improved:	0.003
- flatness, standard:	0.010
improved:	0.003
Pneumatic supply:	6 bar



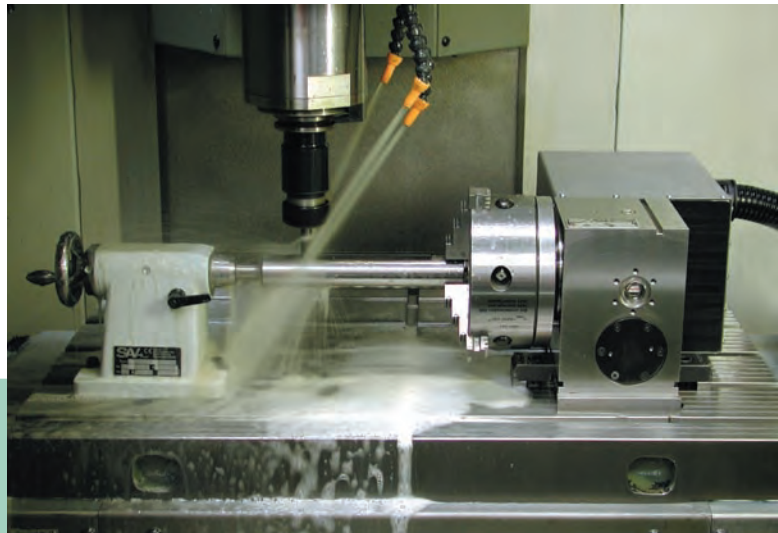
WORKHOLDING AND AUTOMATION

NC ROTARY INDEXER – APPLICATION EXAMPLES

SAV 220.51



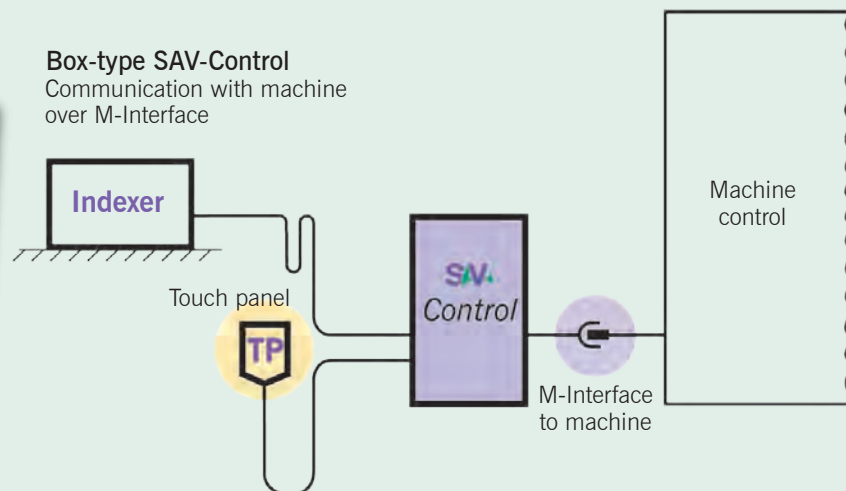
Execution:
NC Rotary Indexer
with quick clamping chuck ITS



Execution:
NC-Rotary Indexer
with 3 Jaw-chuck
and mechanical counter support



Box-type SAV-Control
Communication with machine
over M-Interface



Ordering example: **NC Rotary Indexer SAV - 434.51 - ITS 100 with SAV control**
 Ordering key: Name SAV - No. - Specific Requirements



WORKHOLDING AND AUTOMATION

ROTARY INDEXER WITH DIRECT DRIVE

SAV 434.52

Application:

Positioning of workpieces along horizontal axle.
Maximum workpiece weight 80 kg dynamic
or even up to 120 kg when applied vertically.



Can also be applied for circular grinding.

Product description:

Extremely stable and highly dynamic, direct driven Rotary Indexer with double bearing spindle. Indexing measuring system directly on the spindle with hydraulic clamping.

The indexer can be supplied in either horizontal (H) or vertical design (V).

Execution of the spindle flange for mounting to the workpiece on customer specification (e.g. for manual clamping with HSK or Jaw-Adaption or adaptor for automatic zero-reference-system).

The design of this indexer ensures almost wear free operation (outer bearing) without additional cooling.

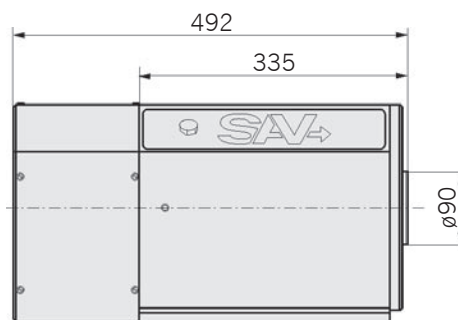
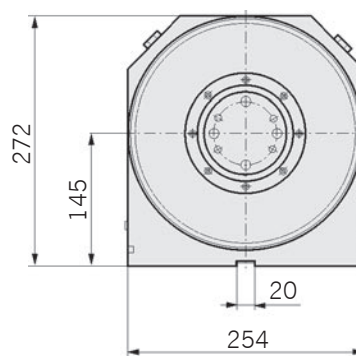
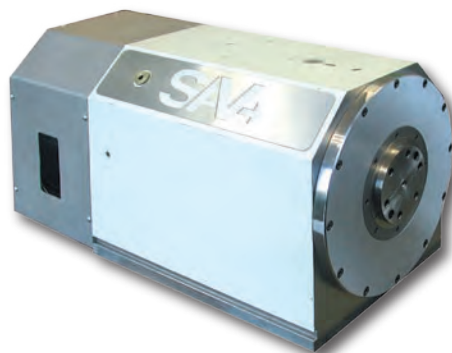
Control:

The direct driven NC Rotary Indexer is standard supplied with Servo-control SIMODRIVE 611U, other controls on request. In this standard execution a maximum of 64 indexed positions and the applicable setting data can be triggered directly by the machine control through a programmable digital interface.

Technical Specifications:

Rotary Indexer	Execution	
	Horizontal	Vertical
Length L (mm)	492	420
Width B (mm)	254	290
Height H (mm)	272	475
Spindle height (mm)	145	-
Max. dead weight (kg)	250	300
Max. workpiece weight (kg)	80	120

Max. perm. Axial force (N):	20,000
Torque; peak (Nm):	280
continuous (Nm):	70
Clamping force (Nm):	1500
Max. revolutions (rpm)	200
Positioning accuracy	arcsec
Setting accuracy, standard:	± 10
improved:	± 2.5
Repeatability standard:	± 5.0
improved:	± 2,5



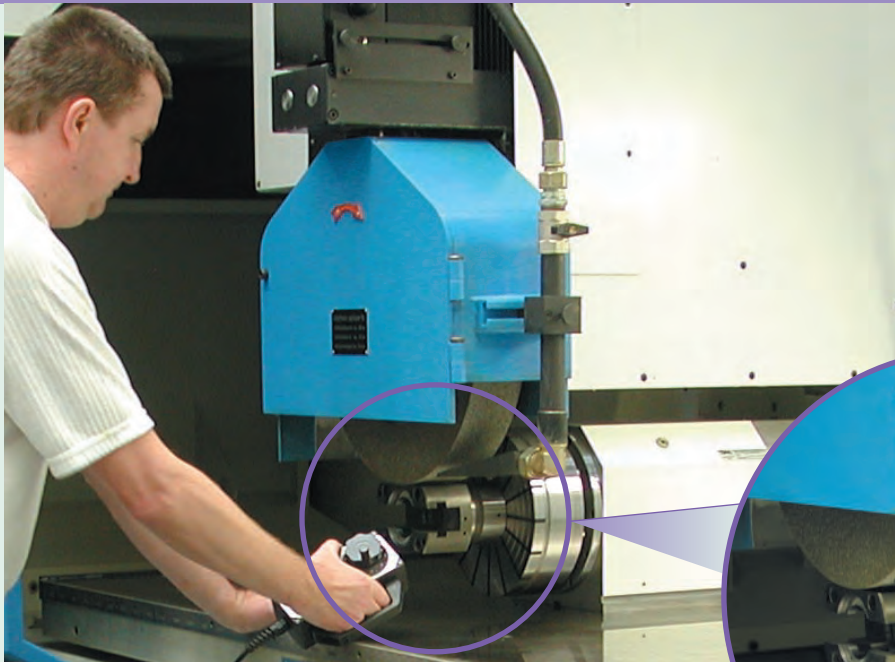
Setting time (s/90°):	0.2
Geometry:	mm
- concentricity, standard:	0.015
improved:	0.005
- Flatness, standard:	0.015
improved:	0.005
Electrical supply:	3 x 400 VAC, 32 A, 50 Hz
Pneumatic supply (bar):	6

Ordering example: Rotary Indexer SAV - 434.52 - V - S - with SIMODRIVE 611U
Ordering key: Name SAV - No. - Type - Specific Requirements

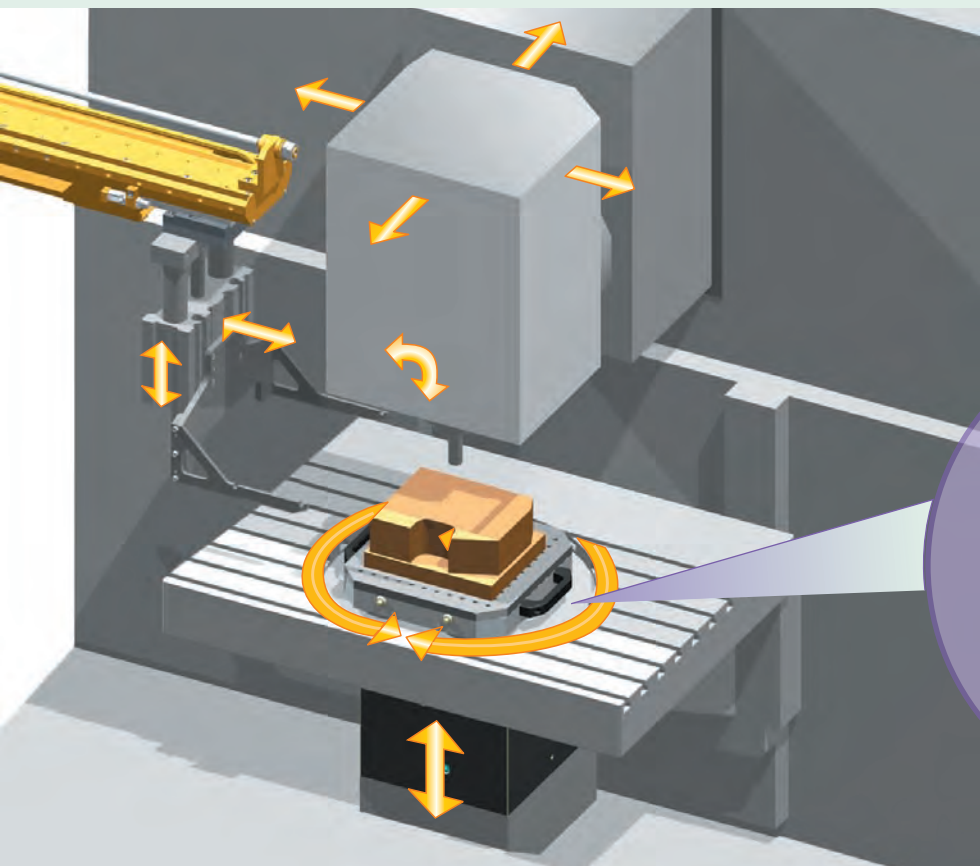


WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES

**Application:**

Positioning of workpieces for circular and surface grinding in one setup

Application:For 5 side operation milling;
supplied as 5th axle - on request.



WORKHOLDING AND AUTOMATION

ROLLING TRANSPORTER

SAV 228.01

SAV[®] SYSTEMS-LIFT G100-AI-1

Application:

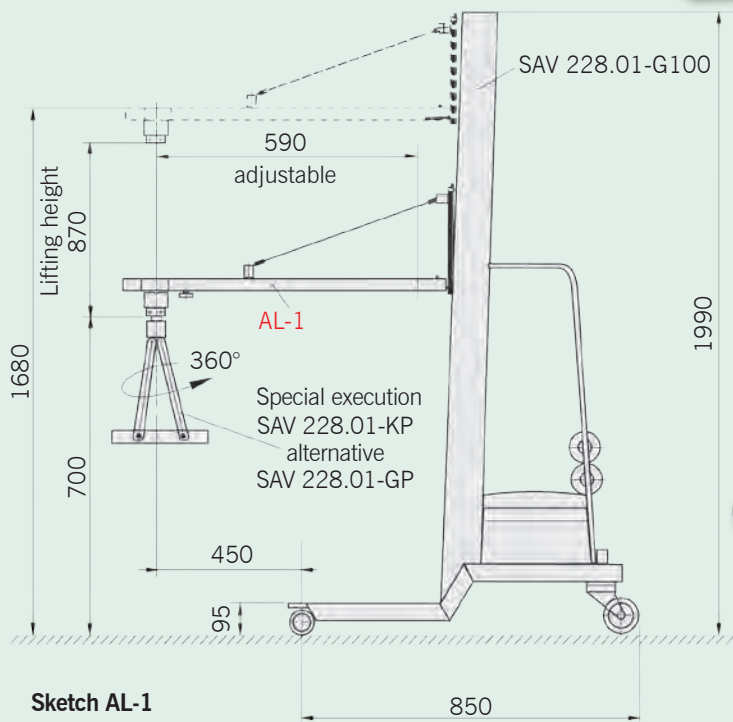
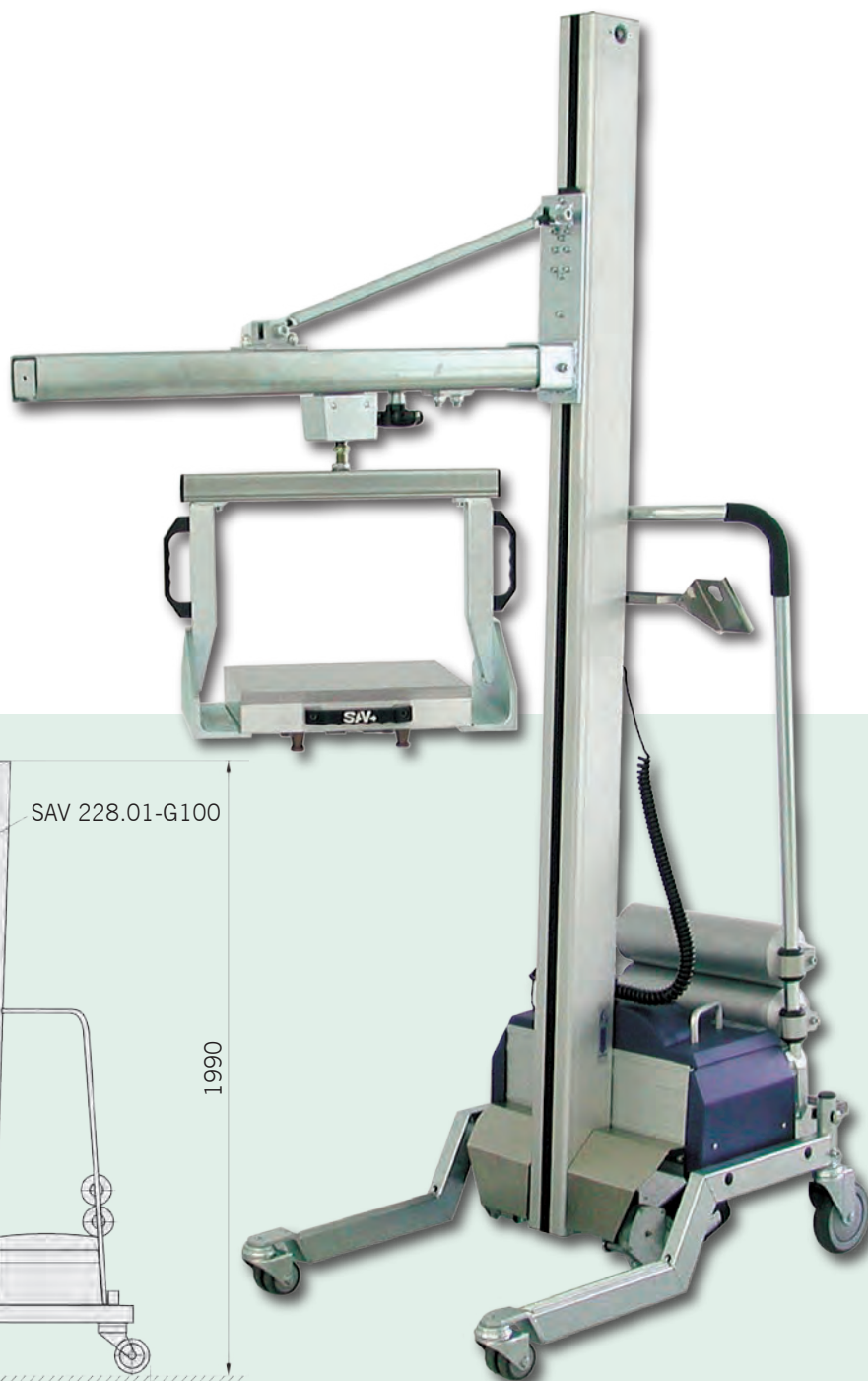
For transport of pallets and easy positioning on the machines reference system.

With pallets of 25 to 30 kg and up the handling of loaded pallets becomes more and more difficult.

The limited access to the machines and measuring facilities and the restricted manoeuvring space on the work floor makes the use of a safe and simple transport system inevitable.

Technical Specifications:

- SAV 228.01 - G100 suitable for weights up to 100 kg.
- Additional:
 - Lift arm with limited top space access see sketch AI - 1
 - Lift arm with limited reach see sketch AI - 2
- With the battery powered, electrical driven lift axle the load can be safely and accurately positioned. This transporter can be extended with several mounting sets to adapt to the different pallet sizes and reference systems.
- Rotation of Lifting tool 360°

SAV[®] SYSTEMS-LIFT G100-AI-1

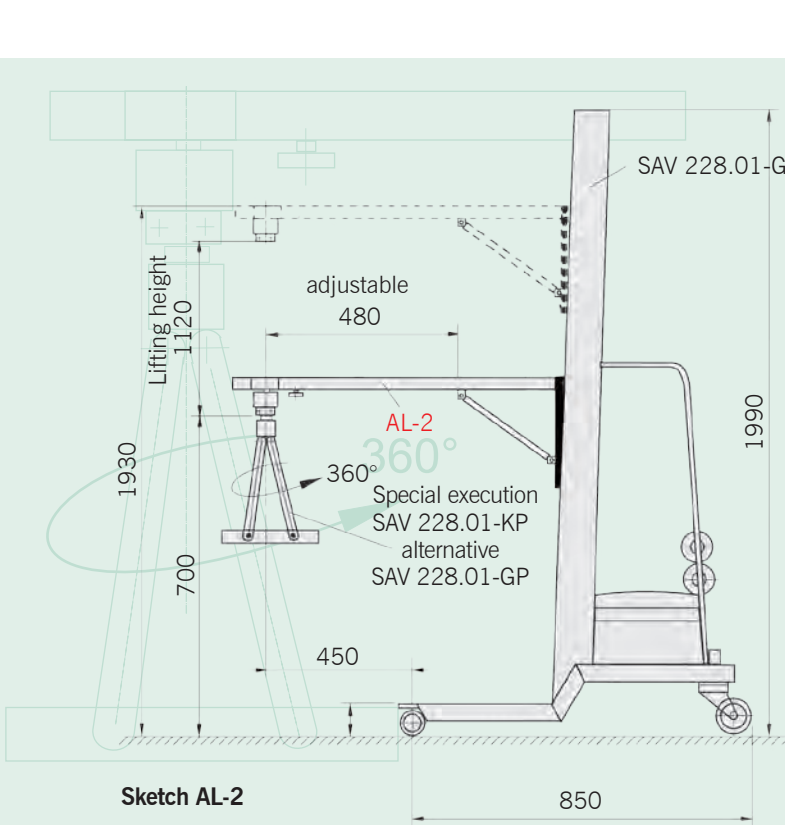
Ordering example: Rolling Transporter SAV 228.01 - G100 - AI - 1
 Ordering key: Name SAV-No. - Type - Arm



WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES

SAV[®] SYSTEMS-LIFT G100-AI-2



SAV[®] SYSTEMS-LIFT G100-AI-2



WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES

SAV SYSTEMS-LIFT G100-AL-1



Smooth pallet lifting with electrical driven lift movement

SAV-SYSTEMS-LIFT G100-AL-1

Transport and position your workpiece with SAV SYSTEMS-LIFT

Precise and reliable positioning on the reference table

rolls lightly and safe





WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES



Systems-lift CD available

SAV[®] SYSTEMS-LIFT

Ensures precise loading of the machine



Simple release of the SAV-SYSTEMS-LIFT





WORKHOLDING AND AUTOMATION

PALLET LIFTER

SAV 228.01 - KP

Material:

Construction steel

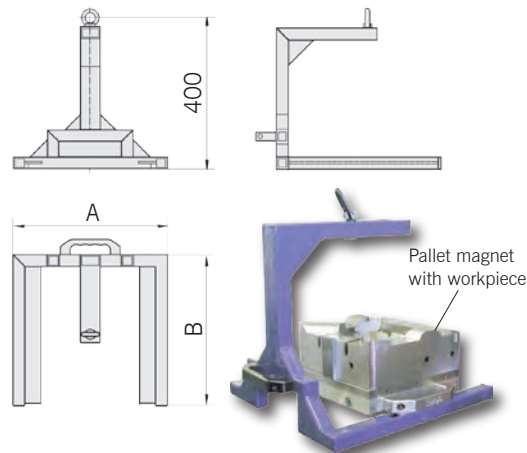
Application:

For loading of machines, pallets and robot magazines, machine loading stations, measuring machines and storage racks.

Technical Specifications:

- Light and precise positioning of pallets on workholding system or on machine table.
- Transported by SAV-systems-Lift SAV 228.01 or by work shop rotating crane.
- Transfers weight 200 kg (incl. Pallet)
- Other dimensions on request

System	Dimensions (mm)		Weight (kg)
	A	B	
240	305	300	5.0
280	345	340	5.8
320	385	380	6.5



Ordering example: Pallet Lifter SAV 228.01 - KP - 240

Ordering key: Name SAV - No. - System

ADJUSTABLE PALLET LIFTER

SAV 228.01 - GP

Material:

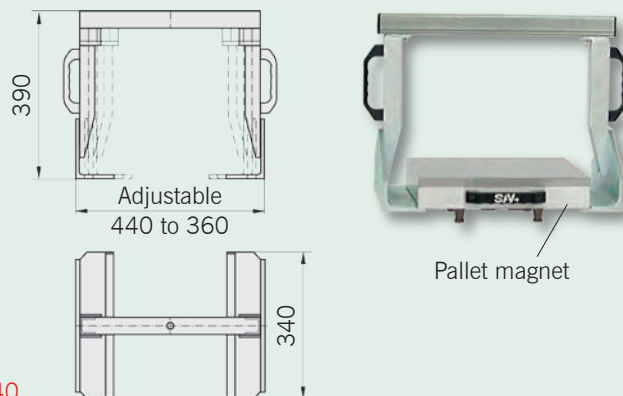
Galvanised non-eroding steel

Application:

For loading of machines, pallets and robot magazines, machine loading stations, measuring machines and storage racks.

Technical Specifications:

- For pallet weights up to 200 kg, lifter weight 6 kg
- Safe handling by SAV-systems-Lift or by work shop crane
- Adjustable to different pallet sizes



Ordering example: Adjustable Pallet Lifter SAV 228.01 - GP - 240

Ordering key: Name SAV - No. - System

UNIVERSAL PERMANENT LIFTING MAGNET

SAV 531.01

Application:

Compact and light lifting tool for safe, easy and quick transport of heavy workpieces, equipment and ferromagnetic materials in workshop and warehouse.

Technical Specifications:

- Switching On/Off by turning the lever 120°
- High lift capacity due to use of Neodymium magnets
- Easy switching by hand on closed magnetic circuit



Nominal capacity on flat material * in daN	125	250	500	1000	2000
Nominal capacity on round material in daN	40	125	250	500	1000
Min. workpiece diameter in mm	50	60	65	100	150
Max. workpiece diameter in mm	100	200	270	300	350
Length in mm	93	152	246	305	480
Width in mm	60	100	120	140	165
Height to crane hook in mm	110	164	164	216	251
Weight in kg	2.6	10	20	40	90

* The nominal lifting capacity is based on a safety factor of at least 3, assuming ground poles and a 50 mm thick St 37 workpiece.

Ordering example: Universal Permanent Lifting Magnet SAV 531.01 - 500

Ordering key: Name SAV - No. - Lift Capacity*



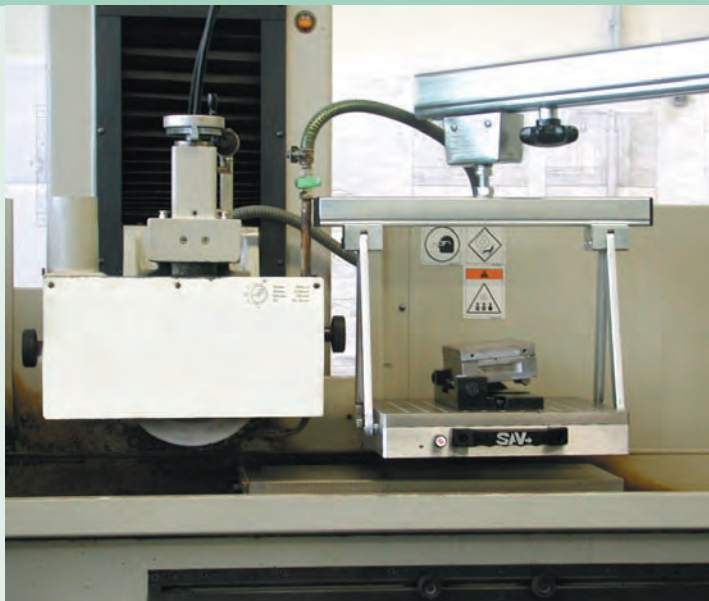
WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLES



Application:
Pallet lifter SAV 228.01 - KP
mounted to shop crane

Application:
Pallet lifter SAV 228.01 - GP
used for loading a grinding machine



Application:
Universal Permanent lift magnet SAV 531.01
mounted to shop crane



WORKHOLDING AND AUTOMATION

PALLETISING FOR AUTOMATION

SAV 228.20

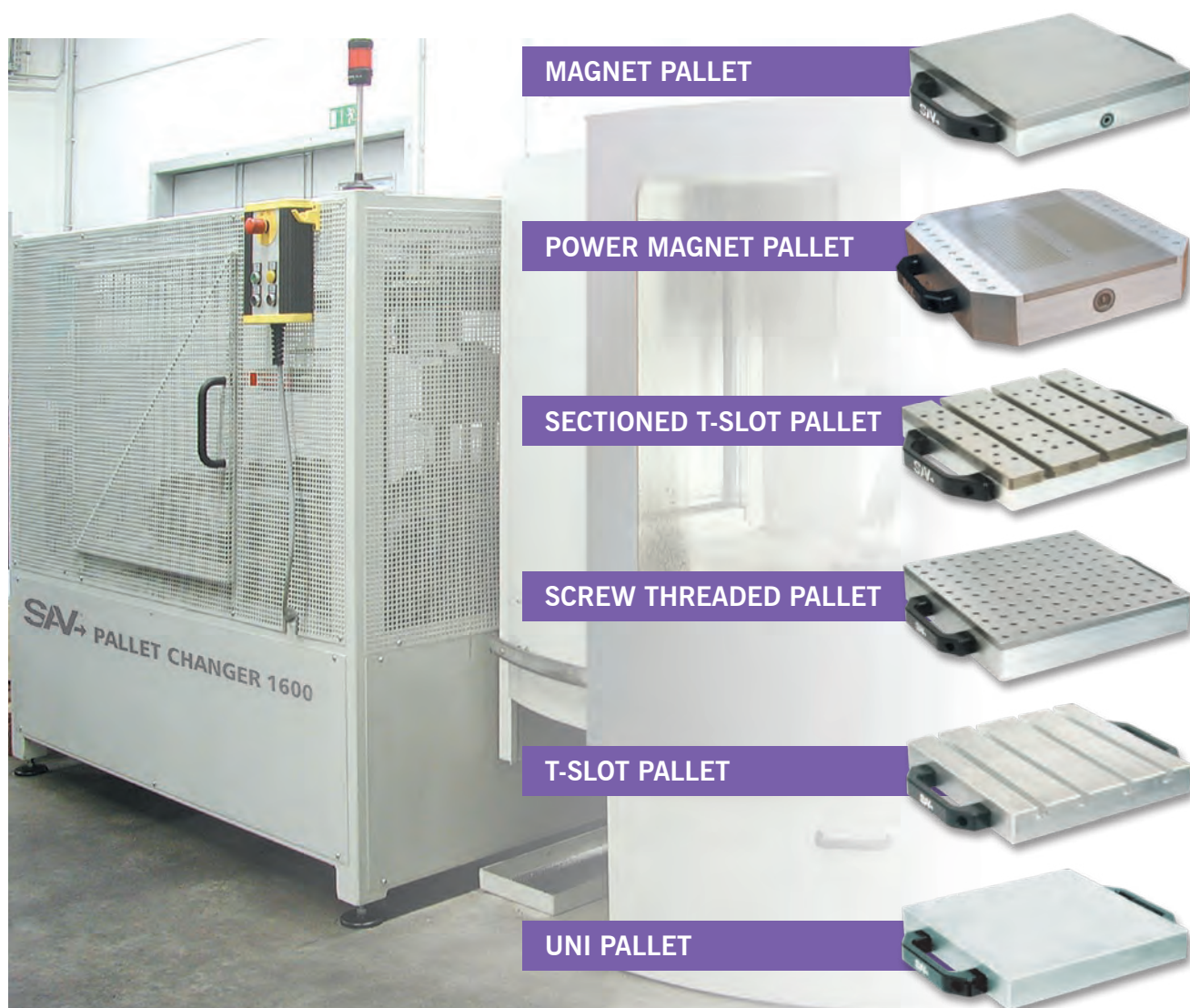
We supply automation solutions to machine builders and users in the machine and tool industry. Regardless for what reference system, we can supply for your typical operation

SAV – Pallet systems

High reliability, precision and quality.

SAV → PALLET CHANGER 1600

for weights up to 80 kg per pallet



Special solutions on request



MAGNET CIRCULAR
PALLET



SCREW THREADED
CIRCULAR PALLET



T-SLOT CIRCULAR
PALLET



UNI CIRCULAR
PALLET



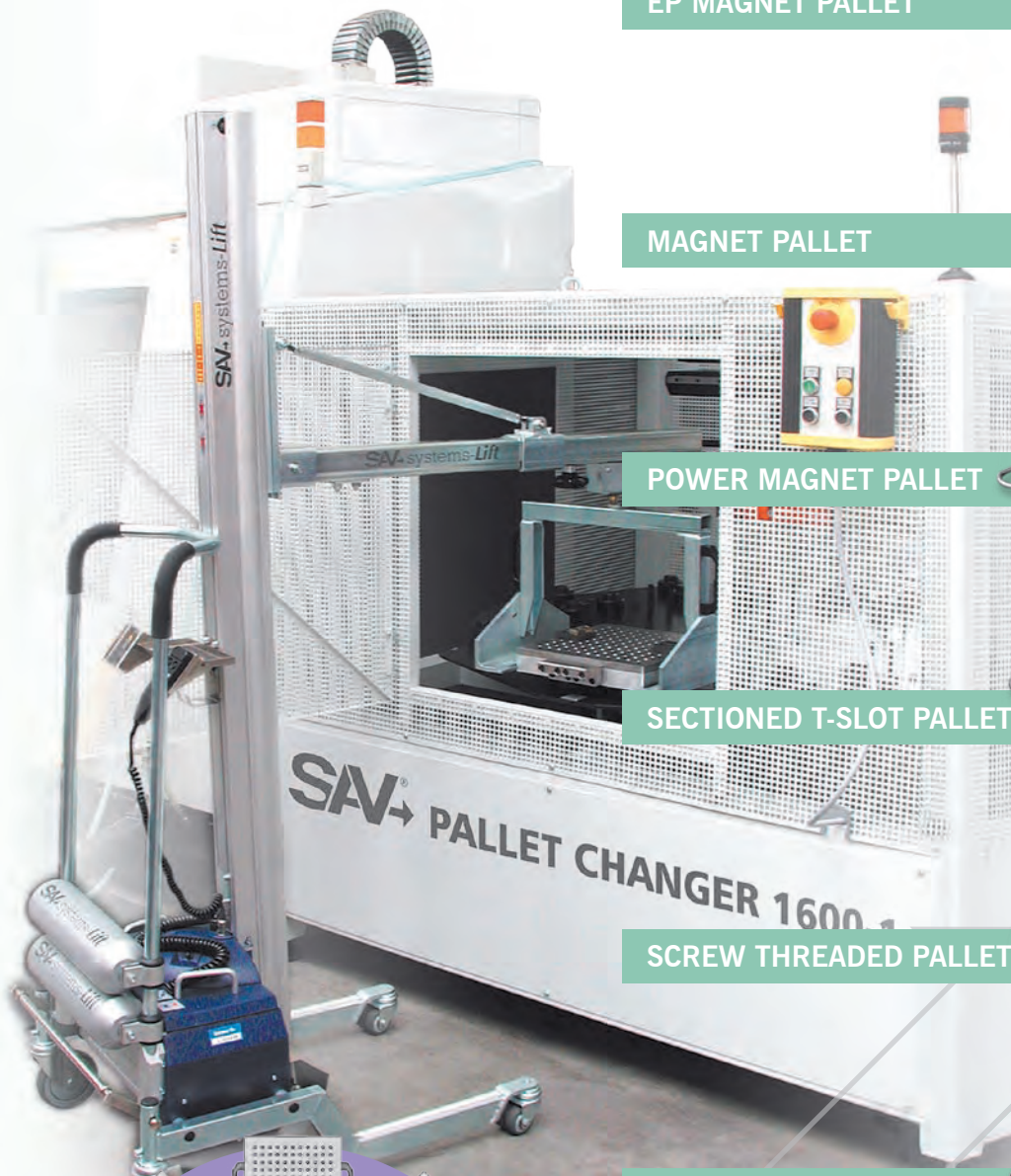
WORKHOLDING AND AUTOMATION

PALLETISING FOR AUTOMATION

SAV 228.20

SAV → PALLET CHANGER 1600-1

for weights up to 120 kg per pallet



EP MAGNET PALLET



MAGNET PALLET



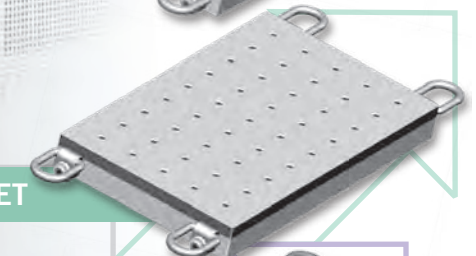
POWER MAGNET PALLET



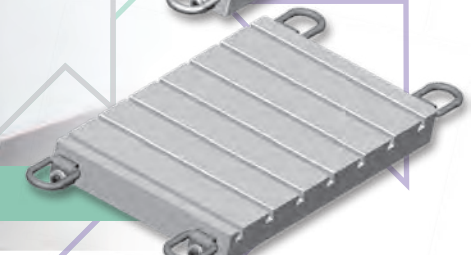
SECTIONED T-SLOT PALLET



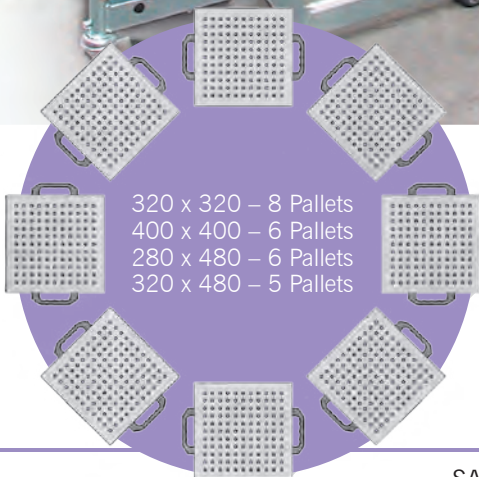
SCREW THREADED PALLET



T-SLOT PALLET



UNI PALLET





WORKHOLDING AND AUTOMATION

AUTOMATION SOLUTIONS

SAV 228.20



SAV PALLET CHANGER 1600-1

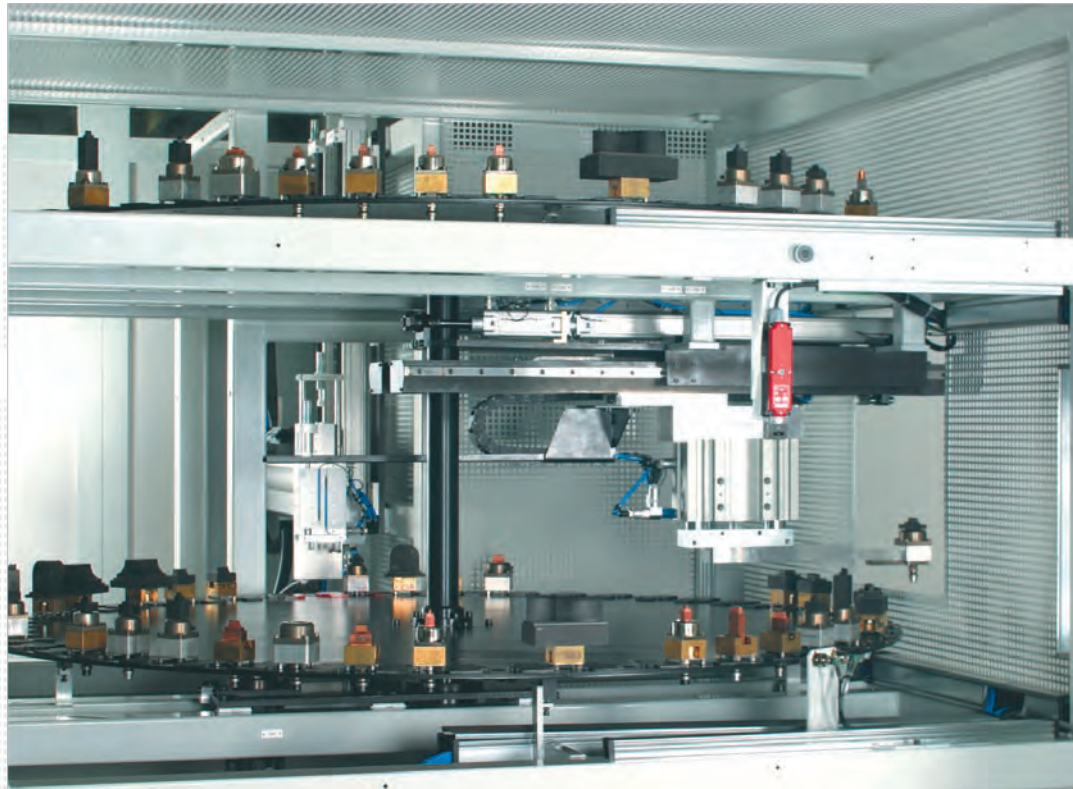


SAV YOUR BEST PARTNER FOR WORKHOLDING!



WORKHOLDING AND AUTOMATION

APPLICATION EXAMPLE

PALLET CHANGER PW 1800-22 x 48 ITS 50/100
for electrode fixtures

- Transfer axle reach 1100 mm
- max. load 15 kg
- exchange time < 30 sec
- can simply be modified for other applications

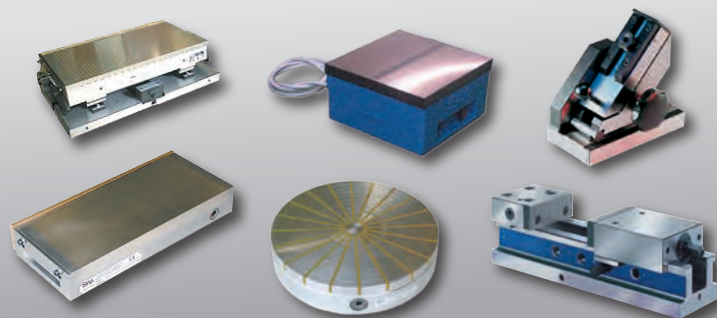


WORKHOLDING AND AUTOMATION

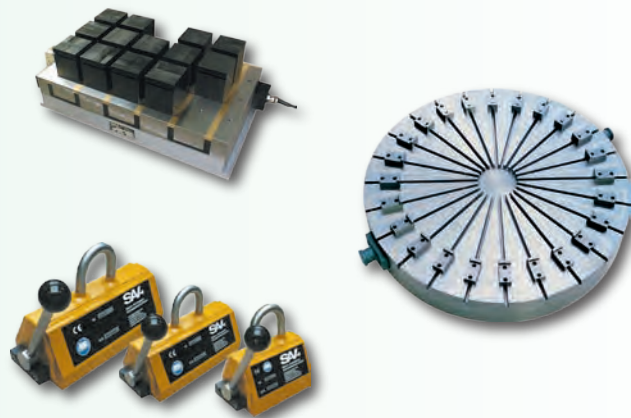
OTHER AVAILABLE CATALOGUES



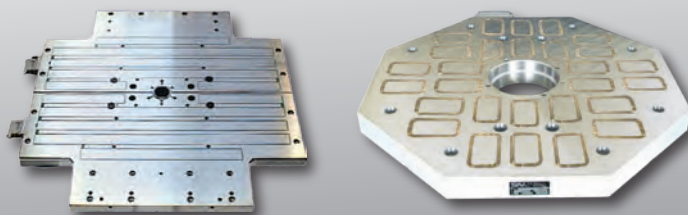
Tool & Apparatus Industry



Steel Construction Industry



Quick Die & Mould Change



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