

Punch Former

Grinding Accessories



A01-A62

Punch Former

50010

PFH350

Precision Punch Former



PAT:M386114
ZL 2010 2 0190858.6



Features :

- ▶ Suitable for grinding and EDM machines.
- ▶ Compact and durable structure with through hole design which makes it capable of forming various shapes of punches as well as electrode.
- ▶ Stopper design for fast positioning polygonal punches.
- ▶ Fine-tuning for vertical movement of V-block, easy for clamping workpiece and center calibration.
- ▶ Adopting high precision double bearings to achieve higher stability and accuracy, it also makes longer lifecycle.
- ▶ Made of stainless steel, rustless & maintenance easy.

N.W. 10kg

Note :V-block is made of SKD11 in order to enhance hardness



- ▶ V block is adjustable for calibration even when small workpiece is clamped.
- ▶ Two clamp plates on both side of V block helps the consistent movement.
- ▶ Release the screw when make adjustable and lock with slight force.

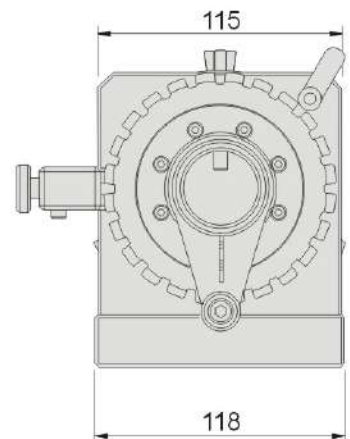
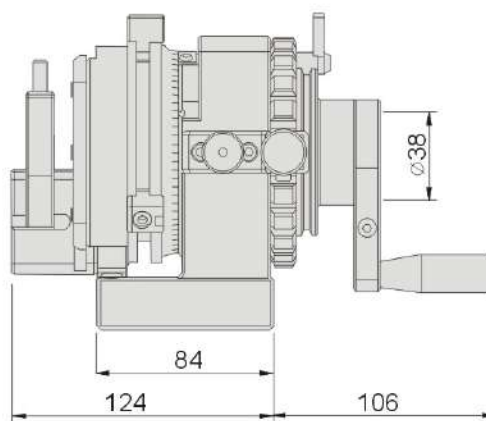
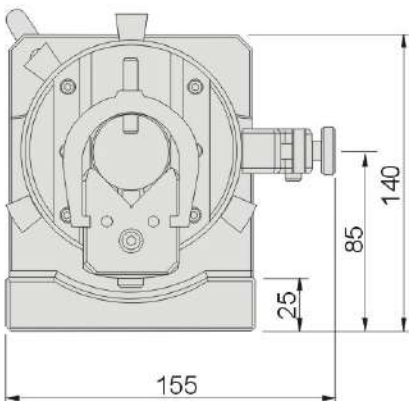
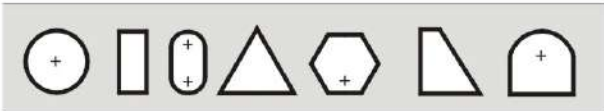
Precisely ground screw rod for fine-tuning of V-block vertical movement.



Main parameters:

Center height	85 ± 0.5mm
Clamping dia. range of V-block	∅ 3~38mm
Travel of V-block	30mm
Indexer tooth q'ty & accuracy	24, 15° ± 5"
Clamping accuracy (50mm)	0.005mm
Through hole diameters	∅ 36mm

Punch forming applications



50020 PFH450 Precision Punch Former



PAT:M423023
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N.W. 12kg



PUNCH FORMER

Note :V-block is made of SKD11 in order to enhance hardness

Features :

- ▶ Suitable for grinding and EDM machines.
- ▶ Compact and durable structure which makes it capable of forming various shapes of punches as well as electrode.
- ▶ With slide plate horizontal movement, it can make eccentric radius punches.

Stopper design for fast positioning polygonal punches.

- ▶ Fine-tuning for vertical movement of V-block, easy for clamping workpiece and center calibration.

- ▶ Adopting high precision double bearings to achieve higher stability and accuracy, it also makes longer lifecycle.

- ▶ Made of stainless steel, rustless & maintenance easy.

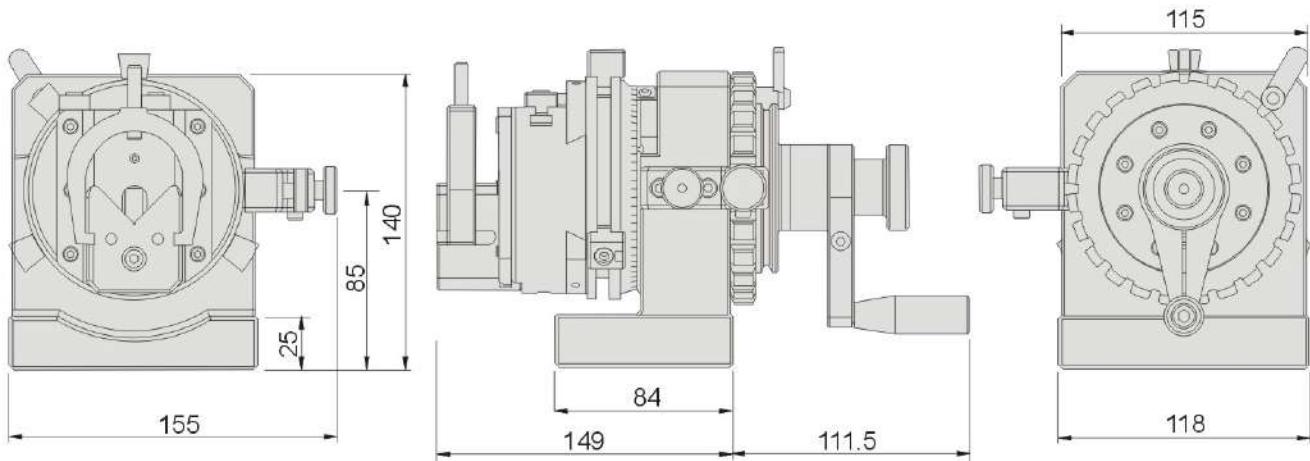
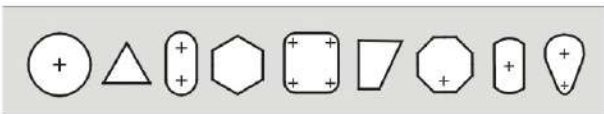


- V block is adjustable for calibration even when small workpiece is clamped.
- Two clamp plates on both side of V block helps the consistent movement.
- Release the screw when make adjustable and lock with slight force.

Main parameters:

- Center height $85 \pm 0.5\text{mm}$
- Clamping dia. range of V-block $\varnothing 3\text{--}38\text{mm}$
- Travel of V-block 38mm
- Indexer tooth q'ty & accuracy $24, 15^\circ \pm 5''$
- Clamping accuracy (50mm) 0.005mm
- Slide plate horizontal movement $\pm 18\text{mm}$

Punch forming applications



Punch Former

50030

PFH

Multi-Flex Punch Former - Body only

PUNCH FORMER



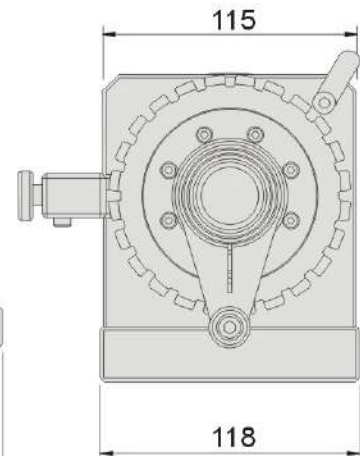
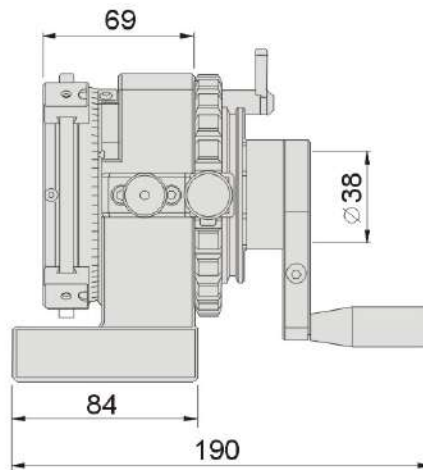
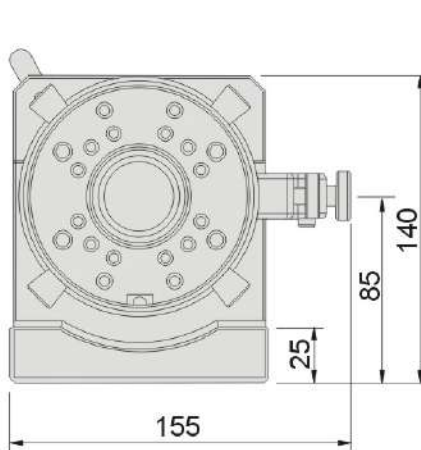
PAT:M421169
ZL 2010 2 0190858.6



Features :

- ▶ Suitable for grinding and EDM machines.
- ▶ Compact and durable structure with through hole design which makes it capable of forming various shapes of punches.
- ▶ Adopting high precision double bearings to achieve higher stability and accuracy, it also makes longer lifecycle.
- ▶ Modulisation with various components(See page A04) to achieve cost effect effectiveness.
- ▶ Made of stainless steel, rustless & maintenance easy.

N.W.7.8kg



Order No.	Model	N.W.
50030	PFH**	7.8kg
50035-00	SC40	2.2kg
50035-01	SC04	1.0kg
50035-02	SC05	7.0kg
50035-03	SER20*	0.48kg
50035-04	SER32*	0.51kg
50035-05	SER50*	0.55kg
50035-07	3R24	0.6kg
50035-08	3R28	1.0kg
50035-09	EQC50	0.6kg
50035-10	EQC100	2.0kg

**Body only

*Collet excluded

Features :

- ▶ Modulisation
- ▶ High rigidity, accuracy and stability
- ▶ Strong clamping force
- ▶ Various clamping size
- ▶ Flexible, fast and convenient
- ▶ Unique design with special surface treatment, longer lifecycle

Modularise components
(see next page for more info.)

50035 Modularise Components for PFH & EPF

PUNCH FORMER



50035-00
SC40



50035-01/02
SC04/05



50035-03/04/05
SER/20/32/50
(Collet excluded)



50035-07
3R24



50030
PFH

50035-09
EQC50



50035-08
3R28

50035-10
EQC100



50030-07
PFH-3R24



50030-09
PFH-EQC50



50030-08
PFH-3R28



50030-10
PFH-EQC100



50030-00
PFH-SC40



50030-01/02
PFH-SC04/05



50030-03/04/05
PFH-SER20/32/50

Punch Former

50030-00

PFH-SC40

Super Precision 3-Jaws Punch Former

PUNCH FORMER



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Features :

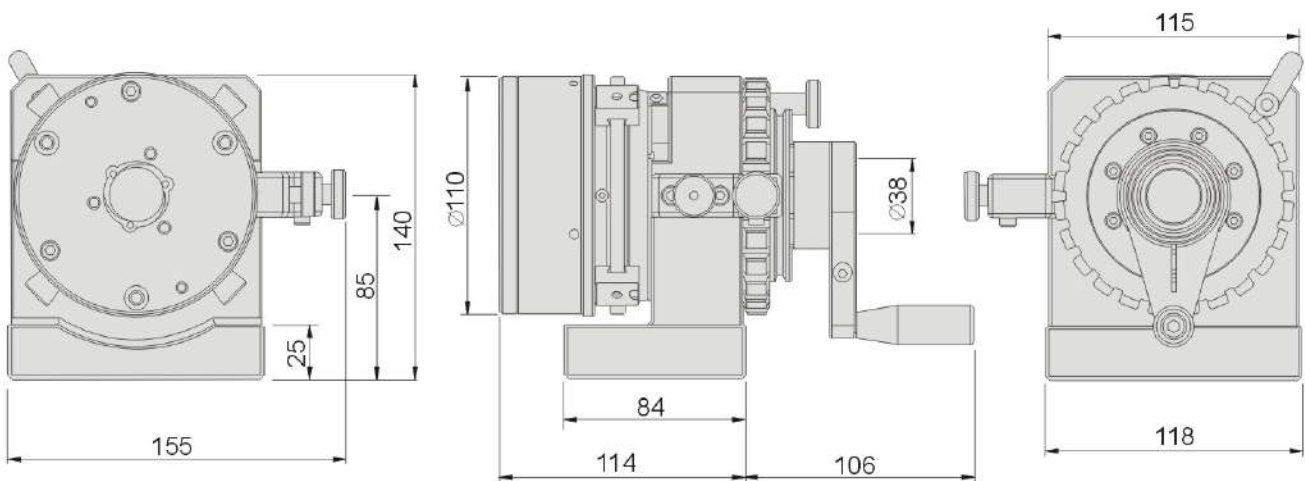
- ▶ PFH-SC40 is adopting quality stainless steel with waterproof and stronger structure leading lasting durability.
- ▶ Special designed SC40 3-Jaw Chuck provide rapid clamping and it suitable for mass production,, workpiece with round shaped can precisely & rapidly clamped.
- ▶ Torque wrench included for precision performance
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.

N.W. 10kg

Note : Apply Torque Wrench at all time, due to SC40 3-Jaw Chuck has high precision structure design, avoiding any possible damage.

Main parameters:

Center height $85 \pm 0.5\text{mm}$
 Indexer tooth q'ty & accuracy $24, 15^\circ \pm 5''$
 Through hole diameters..... $\varnothing 25\text{mm}$
 Hole dia. of 3-Jaw Chuck $\varnothing 25\text{mm}$
 Min. clamping range $\varnothing 1\text{mm}$
 Max. clamping range $\varnothing 25\text{mm}$
 Rotational accuracy 0.003mm
 Repeat accuracy within 0.003mm



50030-01 PFH-SC04 Precision 3-Jaws Punch Former



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Features :

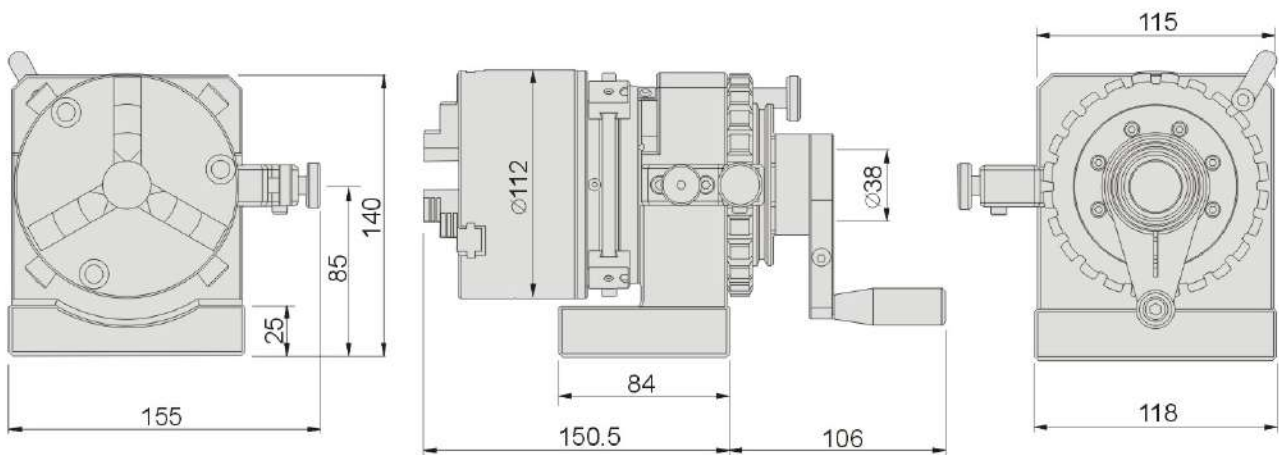
- ▶ PFH-SC04 is adopting quality stainless steel with waterproof and stronger structure leading lasting durability.
- ▶ SC04 3-Jaw Chuck provide rapid clamping and it suitable for mass production, workpiece with round shaped can precisely & rapidly clamped.
- ▶ Due to accumulated tolerance when clamping different sizes of workpieces, special design in adjustment for user own application.
- ▶ Jaw attachment can clamp workpeice with larger diameters.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.

N.W. 8.8kg

Note: SC04 is made of FCD45 material.

Main parameters:

Center height	.....	85 ± 0.5mm
Indexer tooth q'ty & accuracy	.....	24, 15° ± 5"
Through hole diameters	.....	∅ 32mm
Hole dia. of 3-Jaw Chuck	.....	∅ 32mm
Min. clamping range	O.D. ∅3mm, I.D. ∅32mm	
Max. clamping range	O.D. ∅90mm, I.D. ∅84mm	
Rotational accuracy	.....	0.003mm
Repeat accuracy	0.015mm



Punch Former

50030-02 PFH-SC05 Precision 3-Jaws Punch Former



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N.W. 14.8kg



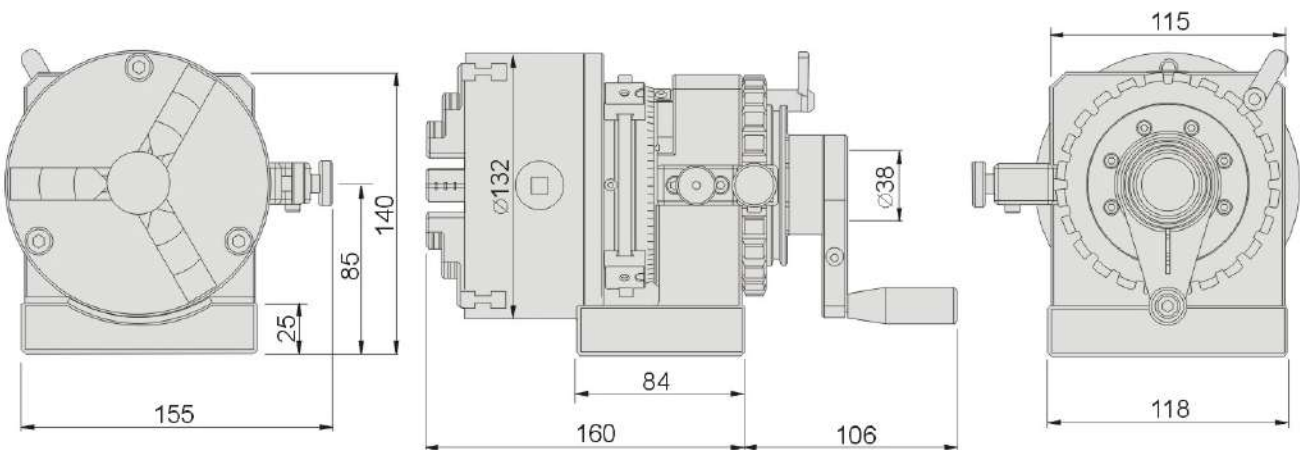
Features :

- ▶ PFH-SC05 is adopting quality stainless steel with waterproof and stronger structure leading lasting durability.
- ▶ SC05 3-Jaw Chuck provide rapid clamping and it suitable for mass production, workpiece with round shaped can precisely & rapidly clamped.
- ▶ Due to accumulated tolerance when clamping different sizes of workpieces, special design in adjustment for user own application.
- ▶ Jaw attachment can clamp workpeice with larger diameters.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.

Note: SC04 is made of FCD45 material.

Main parameters:

Center height	.....	85 ± 0.5mm
Indexer tooth q'ty & accuracy	.....	24, 15° ± 5'
Through hole diameters	.....	∅ 32mm
Hole dia. of 3-Jaw Chuck	.....	∅ 32mm
Min. clamping range	O.D. ∅ 3mm, I.D. ∅ 35mm	
Max. clamping range	O.D. ∅ 110mm, I.D. ∅ 110mm	
Rotational accuracy	.....	0.003mm
Repeat accuracy	.....	0.015mm

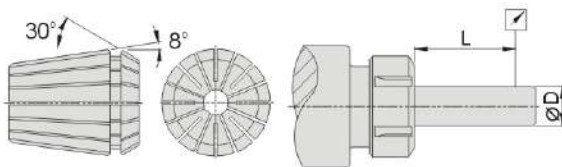


50030-03/04/05 PFH-SER Precision ER Collet Punch Former

PAT:M421169
ZL 2010 2 0190858.6



Note: ER & ER Nut are not made of stainless steel.



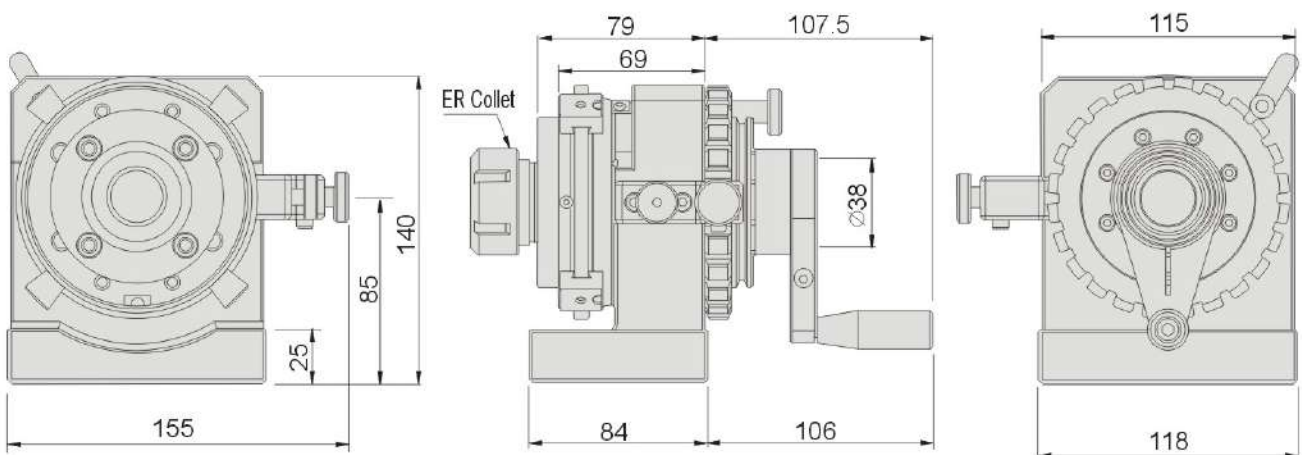
L	D	Accuracy
6	1.0-1.6	0.01
10	1.6-3.0	0.01
16	3.0-7.0	0.01
25	7.0-10.0	0.01
40	10.0-18.0	0.01
50	18.0-24.0	0.01
60	24.0-34.0	0.01

Features :

- ▶ PFH-SER is adopting quality stainless steel with waterproof and stronger structure leading lasting durability.
- ▶ With ER collets, the flexible range of collet is 1mm.
- ▶ Capable collet clamping range: Min. $\varnothing 2\text{mm}$, Max. $\varnothing 34\text{mm}$
- ▶ PFH-SER can rapidly clamp the workpiece and achieving higher stability during processing, no need to adjust the center accuracy.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.
- ▶ This model is compatible with various ER collets such as ER20, ER32, ER50 etc...

Main parameters:

Center height $85 \pm 0.5\text{mm}$
 Indexer tooth q'ty & accuracy $24, 15^\circ \pm 5'$
 Through hole diameters $\varnothing 36\text{mm}$
 Rotational accuracy 0.003mm



Order No.	Model	ER Collet spec.	N.W.
50030-03	PFH-SER20	3, 4, 6, 8, 10	8.3kg
50030-04	PFH-SER32	4, 8, 12, 16, 20	8.3kg
50030-05	PFH-SER50	12, 18, 20, 30, 34	8.4kg

Punch Former

50030-07/08

PFH-3R

Precision 3R Punch Former



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Features :

- ▶ PFH-3R is adopting quality stainless steel with waterproof and stronger structure leading lasting durability.
- ▶ With interchangeable design, components can be chosen according to users' demand.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.
- ▶ This model also works with EROWA Positioning Chuck to achieve modulisation.

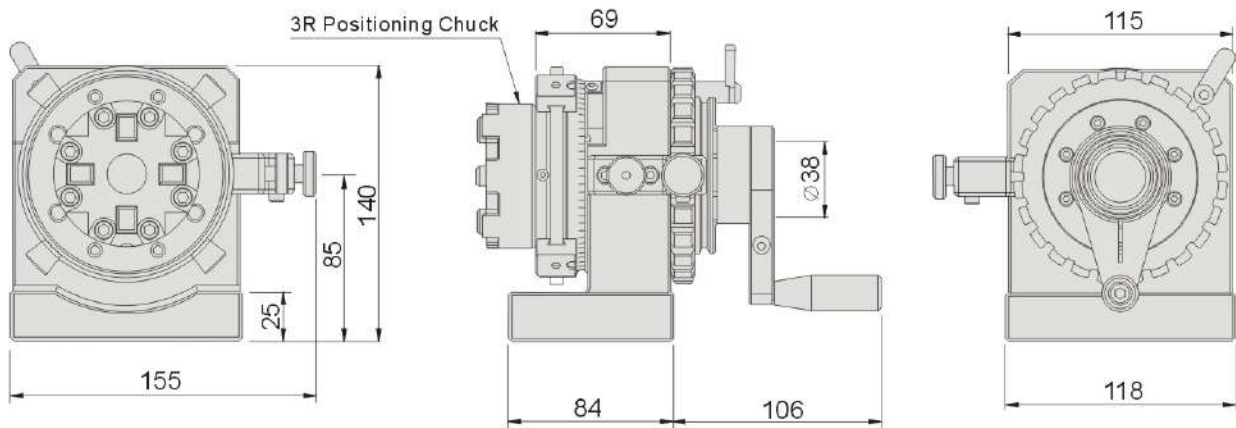
PFH-3R24



PFH-3R28

Main parameters:

Center height $85 \pm 0.5\text{mm}$
 Indexer tooth q'ty & accuracy $24, 15^\circ \pm 5'$
 Rotational accuracy 0.003mm
 Repeat accuracy 0.003mm



Order No.	Model	Positioning Chuck spec	N.W.
50030-07	PFH-3R24	3R24	8.4kg
50030-08	PFH-3R28	3R28	8.8kg

50030-09/10 PFH-EQC Precision EQC Punch Former

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PUNCH FORMER



PFH-EQC50



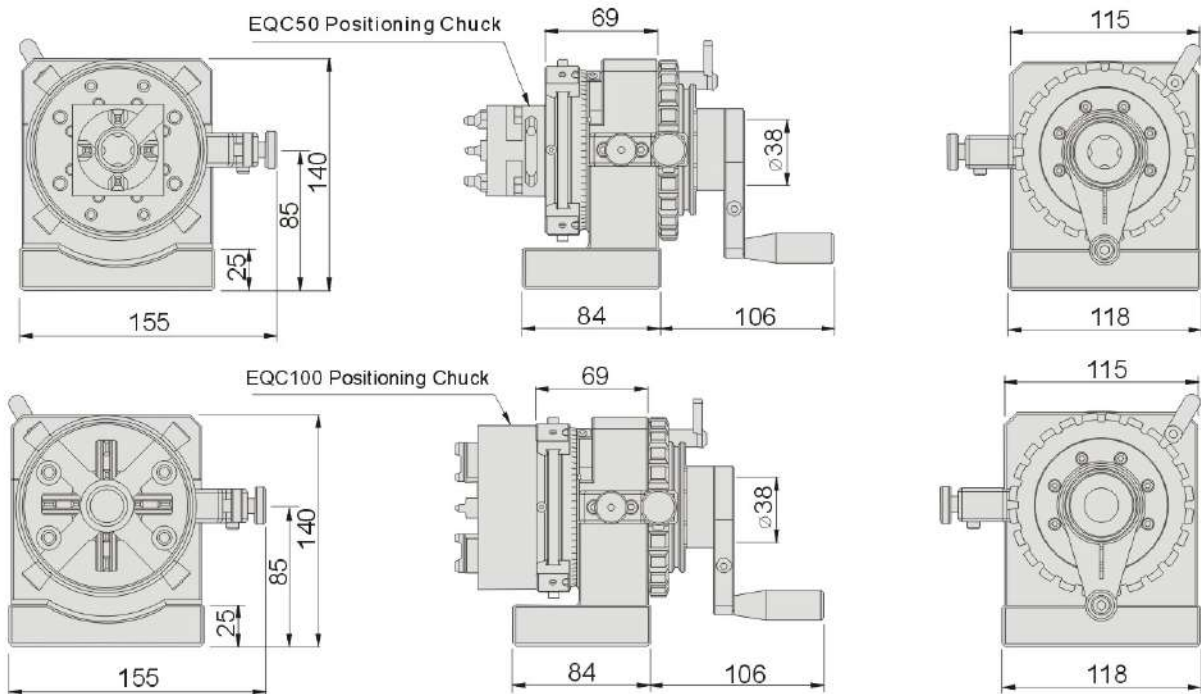
PFH-EQC100

Features :

- ▶ PFH-EQC is adopting quality stainless steel with waterproof and stronger structure leading lasting durability.
- ▶ With interchangeable design, components can be chosen according to users' demand.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.
- ▶ This model also works with System 3R Positioning Chuck to achieve modulisation.

Main parameters:

Center height 85 ± 0.5mm
 Indexer tooth q'ty & accuracy..... 24, 15° ± 5"
 Rotational accuracy..... 0.003mm
 Repeat accuracy 0.003mm



Order No.	Model	Positioning Chuck spec	N.W.
50030-09	PFH-EQC50	EQC50	8.4kg
50030-10	PFH-EQC100	EQC100	9.8kg

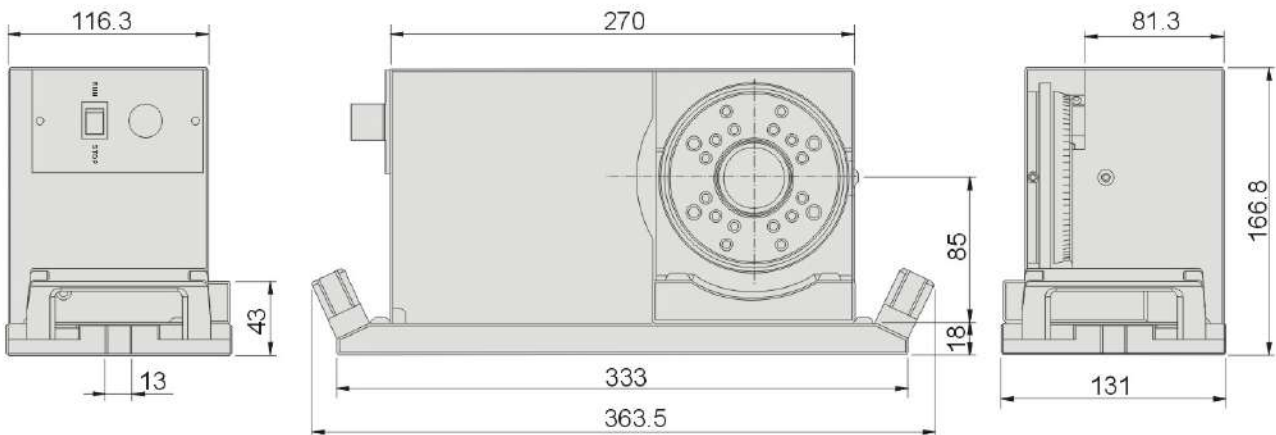
Punch Former

50050 PFHM Motorised Multi-Flex Punch Former - Body only

PAT:M421169
ZL 2010 2 0190858.6



N.W. 24kg



Features :

- ▶ PFHM is adopting quality stainless steel with waterproof and stronger structure leading lasting durability.
- ▶ Motorised function prevent human fatigue when processing.
- ▶ With interchangeable design, components can be chosen according to users' demand such as SC40, SC04, SC05 3-Jaw Chuck, ER20, ER32, ER50 collets.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.
- ▶ Depending on any demands in processing, optional accessories in 50035 page A12 are available to achieve cost effective.

Order No.	Model	Voltage	N.W.
50050-110	PFHM	110V	24kg
50050-220		220V	
50050-00-110	PFHM-SC40	110V	31kg
50050-00-220		220V	
50050-01-110	PFHM-SC04	110V	25kg
50050-01-220		220V	
50050-02-110	PFHM-SC05	110V	31.5kg
50050-02-220		220V	
50050-03-110	PFHM-SER20	110V	24.9kg
50050-03-220		220V	
50050-04-110	PFHM-SER32	110V	24.8kg
50050-04-220		220V	
50050-05-110	PFHM-SER50	110V	25.7kg
50050-05-220		220V	

Features :

- ▶ Modulisation
- ▶ High rigidity, accuracy and stability
- ▶ Strong clamping force
- ▶ Various clamping size
- ▶ Flexible, fast and convenient
- ▶ Unique design with special surface treatment, longer lifecycle

Interchangeable components
(see next page for more information)

50050 PFHM Motorised Multi-Flex Punch Former - Body only



50035-00
SC40



50035-01/02
SC04/05



50035-03/04/05
SER20/32/50
(Collet excluded)

PUNCH FORMER



50050 P A11
PFHM



50050-00 P A13
PFHM-SC40



50050-01/02 P 14/15
PFHM-SC04/05



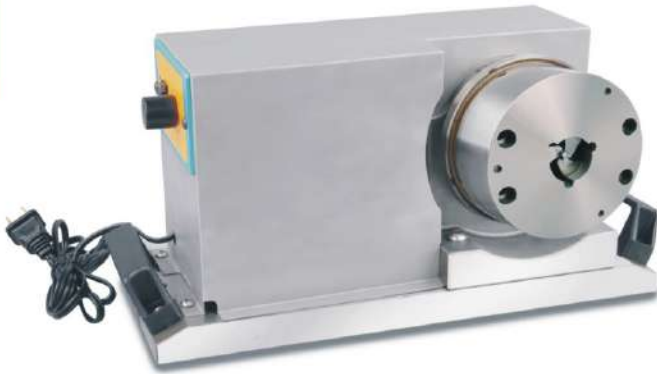
50050-03/04/05 P A16
PFHM-SER20/32/50

Punch Former

50050-00 PFHM-SC40 Motorised Super Precision 3-Jaws Punch Former

PUNCH FORMER

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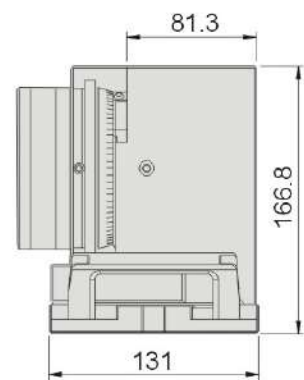
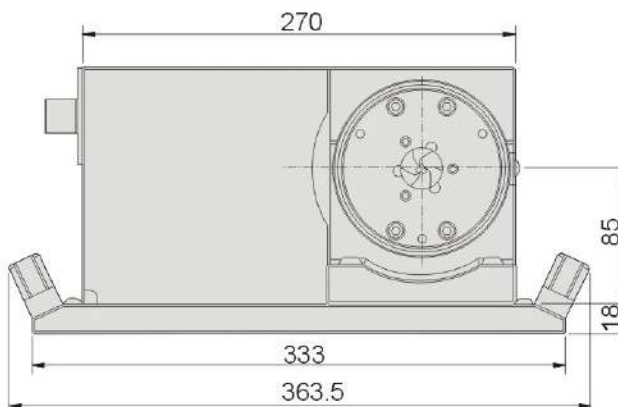
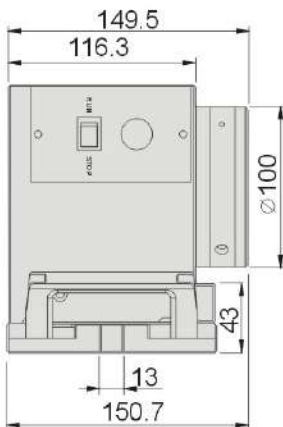
Features :

- ▶ PFHM-SC40 is adopting quality stainless steel with waterproof and stronger structure leading lasting durability.
- ▶ Special designed SC40 Precision 3-Jaw Chuck provide rapid clamping and it suitable for mass production, workpiece with round shaped can precisely & rapidly clamped.
- ▶ Motorised function prevent human fatigue when processing.
- ▶ Torque wrench is included for precision performance
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.

Note: Apply Torque Wrench at all time, due to SC40 3-Jaw Chuck has high precision structure design, avoiding any possible damage.

Main parameters:

- Center height 85 ± 0.5mm
- Through hole diameters Ø 36mm
- Hole dia. of 3-Jaw Chuck Ø 25mm
- Motor : 110V/60Hz 50~550RPM
- Motor : 220V/50Hz 50~550RPM
- Min. clamping range Ø 1mm
- Max. clamping range Ø 25mm
- Rotational accuracy 0.003mm
- Repeat accuracy 0.003mm



Order No.	Model	Chuck Spec.	Voltage	N.W.
50050-00-110	PFHM-SC40	SC40	110V	31kg
50050-00-220			220V	31kg

50050-01 PFHM-SC04 Motorised Precision 3-Jaws Punch Former



PUNCH FORMER

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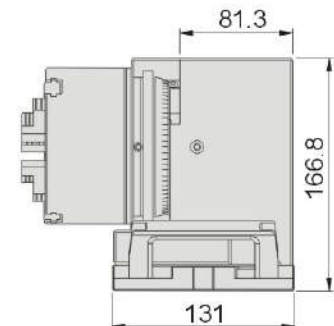
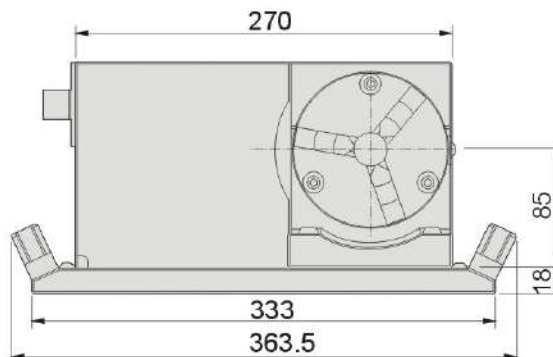
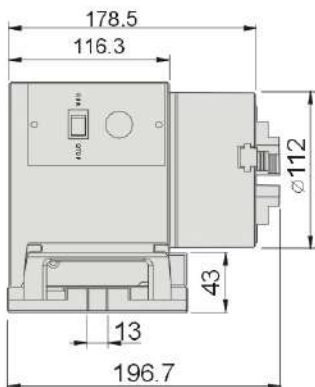
Note: Apply Torque Wrench at all time, due to SC04 3-Jaw Chuck has high precision structure design, avoiding any possible damage.

Features :

- ▶ PFHM-SC04 is adopting quality stainless steel with waterpro of and stronger structure leading lasting durability.
- ▶ Special designed SC04 Precision 3-Jaw Chuck provide rapid clamping and it suitable for mass production, workpiece with round shaped can precisely & rapidly clamped.
- ▶ Motorised function prevent human fatigue when processing.
- ▶ Further attachment Jaw provides capability of clamping larger workpiece.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.

Main parameters:

Center height 85 ± 0.5mm
 Through hole diameters Ø 36mm
 Hole dia. of 3-Jaw Chuck Ø 32mm
 Min. clamping range O.D. Ø3mm, I.D. Ø32mm
 Max. clamping range O.D. Ø3mm, I.D. Ø4mm
 Motor : 110V/60Hz 50~550RPM
 Motor : 220V/50Hz 50~550RPM
 Rotational accuracy 0.003mm
 Repeat accuracy 0.015mm



Order No.	Model	Chuck Spec.	Voltage	N.W.
50050-01-110	PFHM-SC04	SC04	110V	25kg
50050-01-220			220V	25kg

Punch Former

50050-02 PFHM-SC05 Motorised Precision 3-Jaws Punch Former



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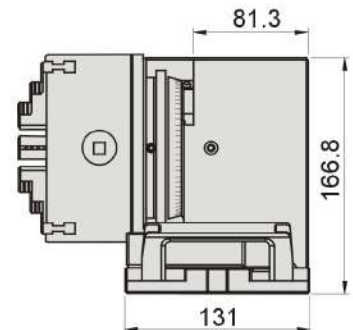
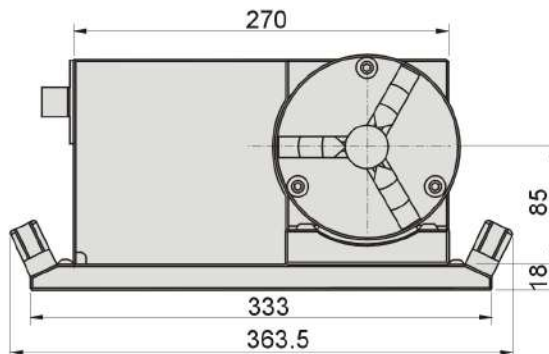
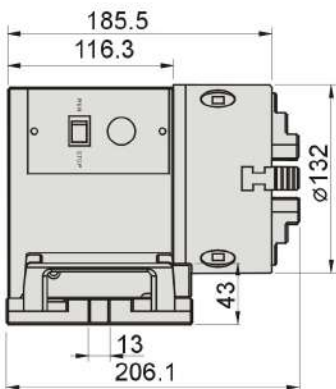
Features :

- ▶ PFHM-SC05 is adopting quality stainless steel with waterproof and stronger structure leading lasting durability.
- ▶ Special designed SC05 Precision 3-Jaw Chuck provide rapid clamping and it suitable for mass production, workpiece with round shaped can precisely & rapidly clamped.
- ▶ Motorised function prevent human fatigue when processing.
- ▶ Further attachment Jaw provides capability of clamping larger workpiece.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.

Note: Apply Torque Wrench at all time, due to SC05 3-Jaw Chuck has high precision structure design, avoiding any possible damage.

Main parameters:

Center height	85 ± 0.5mm
Through hole diameters	∅ 36mm
Hole dia. of 3-Jaw Chuck	∅ 32mm
Min. clamping range	O.D. ∅3mm, I.D. ∅32mm
Max. clamping range	O.D. ∅3mm, I.D. ∅84mm
Motor : 110V/60Hz	50~550RPM
Motor : 220V/50Hz	50~550RPM
Rotational accuracy	0.003mm
Repeat accuracy	0.015mm



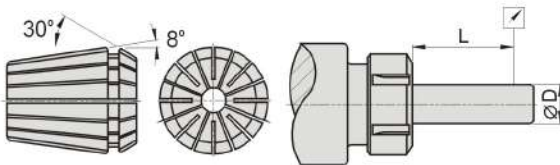
Order No.	Model	Chuck Spec.	Voltage	N.W.
50050-02-110	PFHM-SC05	SC05	110V	31.5kg
50050-02-220			220V	31.5kg

50050-03/04/05 PFHM-SER Motorised Precision ER Collet Punch Former

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Note: ER & ER Nut are not made of stainless steel.



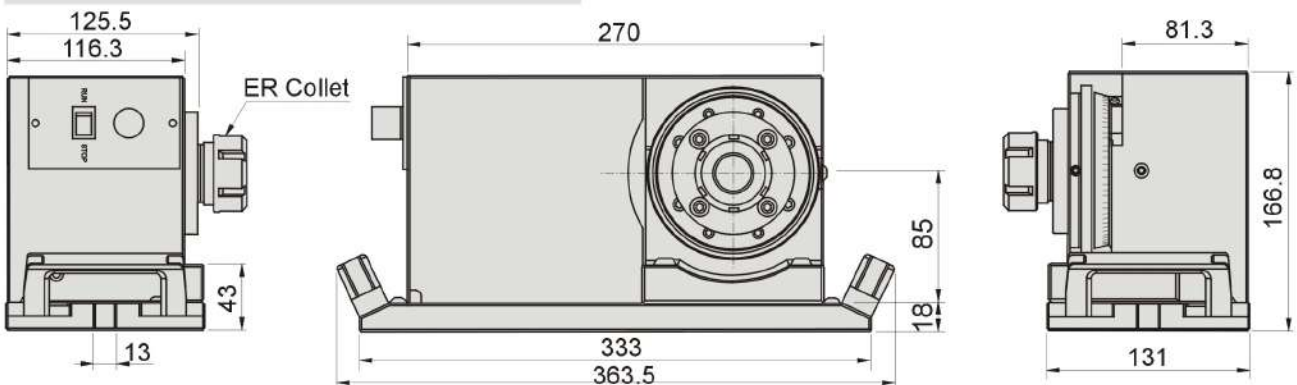
L	D	Accuracy
6	1.0-1.6	0.01
10	1.6-3.0	0.01
16	3.0-7.0	0.01
25	7.0-10.0	0.01
40	10.0-18.0	0.01
50	18.0-24.0	0.01
60	24.0-34.0	0.01

Features :

- ▶ PFHM-SER is adopting quality stainless steel with waterproof and stronger structure leading lasting durability.
- ▶ With ER collets, the flexible range of collet is 1mm.
- ▶ Capable collet clamping range: Min. \varnothing 2mm, Max. \varnothing 34mm
- ▶ PFH-SER can rapidly clamp the workpiece and achieving higher stability during processing, no need to adjust the center accuracy.
- ▶ Motorised function prevent human fatigue when operating.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.
- ▶ This model is compatible with various ER collets such as ER20, ER32, ER50 etc...

Main parameters:

Center height 85 ± 0.5 mm
 Motor : 110V/60Hz 50~550RPM
 Motor : 220V/50Hz 50~550RPM
 Rotational accuracy 0.003mm



Order No.	Model	ER Collet specification	Voltage	N.W.
50050-03-110	PFHM-SER20	3, 4, 6, 8, 10	110V	24.9kg
50050-03-220			220V	24.9kg
50050-04-110	PFHM-SER32	4, 8, 12, 16, 20	110V	24.8kg
50050-04-220			220V	24.8kg
50050-05-110	PFHM-SER50	12, 18, 20, 30, 34	110V	25.7kg
50050-05-220			220V	25.7kg

Punch Former

50060

PF350

Fine-tuning Type Punch Former

PUNCH FORMER



N.W. 8.2kg

Features :

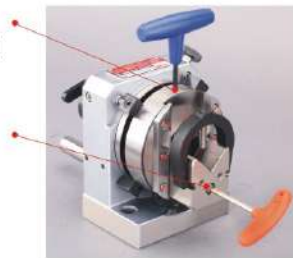
- ▶ Suitable for surface grinder.
- ▶ Compact and durable structure with through hole design which makes it capable of forming various shapes of punches as well as electrode.
- ▶ Stopper design for fast positioning polygonal punches.
- ▶ Fine-tuning for vertical movement of V-block, easy for clamping workpiece and center calibration.
- ▶ Adopting high precision bearings and ball bearing to achieve higher stability and accuracy, it also makes longer lifecycle.
- ▶ Improvement in dust-proof and water resistance level.



- Precisely ground screw rod for fine-tuning of V-block movement.
- Two clamp plates on both side of V block helps the consistent movement.

V block is adjustable for calibration even when small workpiece is clamped.

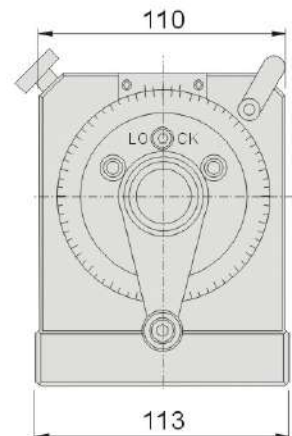
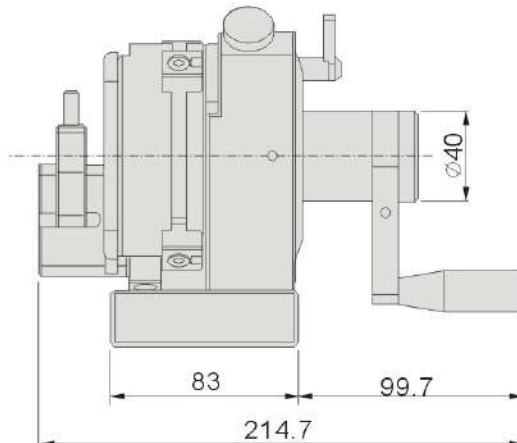
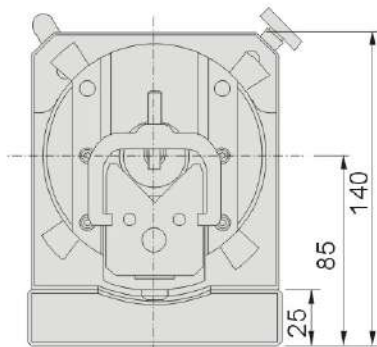
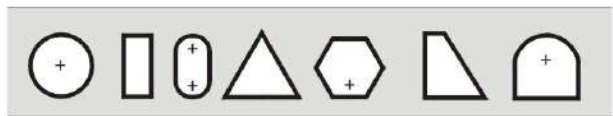
Release the screw when make adjustable and lock with slight force.



Main parameters:

Center height	85 ± 0.5mm
Clamping dia. range of V-block	∅ 3~30mm
Travel of V-block	25mm
Indexer tooth q'ty & accuracy	24, 15° ± 10"
Through hole diameters	∅ 30mm
Clamping accuracy (50mm)	0.005mm

Punch forming applications



50070 PF450 Fine-tuning Type Punch Former (Dual)

PUNCH FORMER



N.W. 9.2kg

Features :

- ▶ Suitable for surface grinder.
- ▶ Compact and durable structure which makes it capable of forming various shapes of punches.
- ▶ With slide plate horizontal movement, it can make eccentric radius punches as well as electrode.
- ▶ Stopper design for fast positioning polygonal punches.
- ▶ Fine-tuning for vertical movement of V-block, easy for clamping workpiece and center calibration.
- ▶ Adopting high precision bearings and ball bearing to achieve higher stability and accuracy, it also makes longer lifecycle.
- ▶ Improvement in dust-proof and water resistance level.



- Stopper block for horizontal movement.
- Screw rod for V block vertical movement..
- Release the screw when make adjustable and lock with slight force.

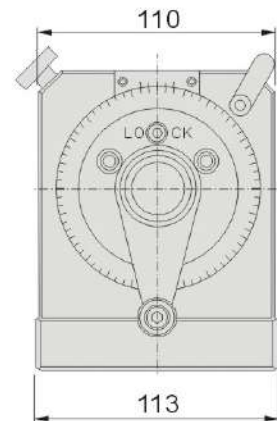
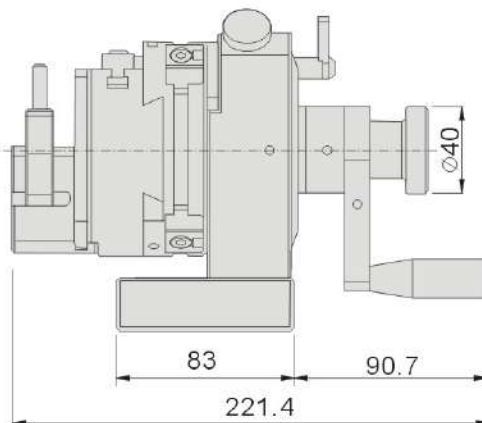
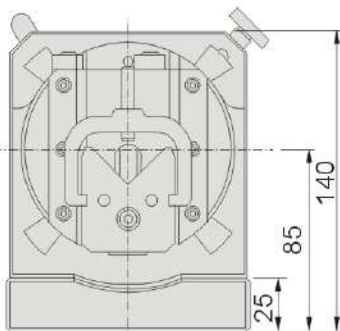
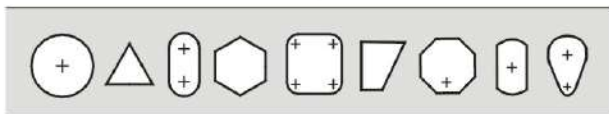
Precisely ground screw rod for fine-tuning of V-block movement.



Main parameters:

Center height	85 ± 0.5mm
Clamping dia. range of V-block	∅ 3~30mm
Travel of V-block	45mm
Slide plate horizontal movement	±18mm
Indexer tooth q'ty & accuracy	24, 15° ± 10"
Clamping accuracy (50mm)	0.005mm

Punch Forming Applications



Punch Former

50080

PF550

3-Jaw Punch Former



PF550-SC40



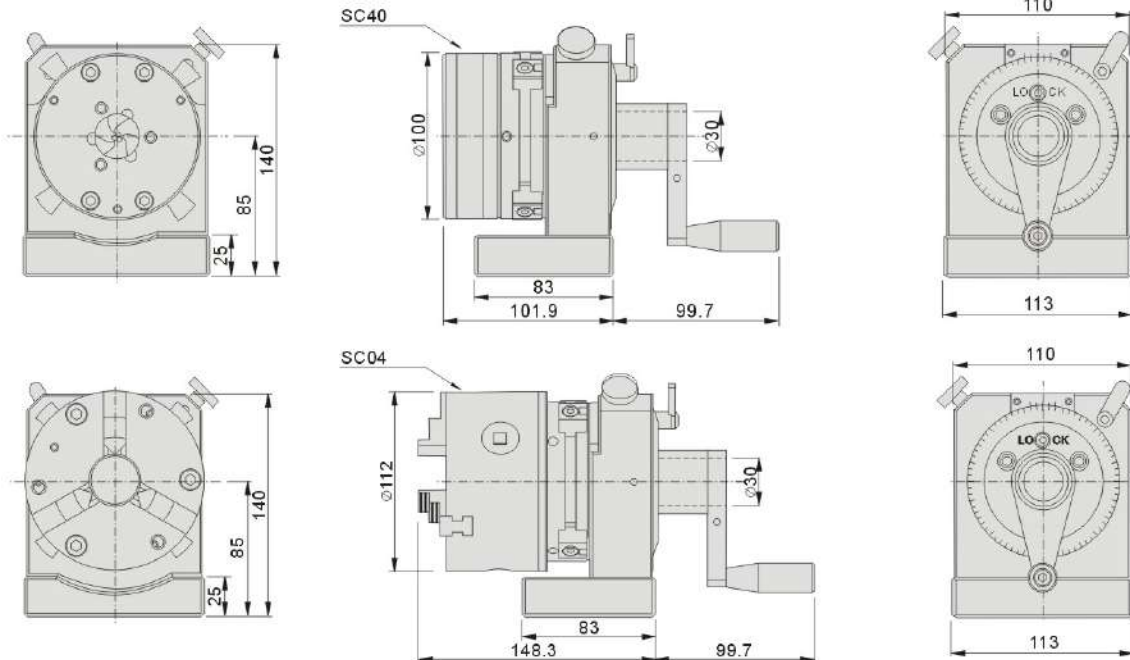
PF550-SC04

Features :

- ▶ Special stainless steel made for SC40 chuck provide rapid clamping accuracy with precision performance.
- ▶ Torque wrench is included for precision performance (Only for SC40)
- ▶ Adopting high precision bearings and ball bearing to achieve higher stability and accuracy, it also makes longer lifecycle.
- ▶ PF550-SC04 Jaw attachment enable larger outer diameter workpiece to be clamped.

Main parameters:

Center height 85 ± 0.5mm
 Indexer tooth q'ty & accuracy 24, 15° ± 10'
SC40 3-Jaw Chuck
 Min. clamping range ø1mm
 Max. clamping range 25mm
 Rotational accuracy 0.003mm
 Repeat accuracy 0.003mm
SC04 3-Jaw Chuck hole dia. ø32mm
 Min. clamping range O.D. ø3mm, I.D. ø32mm
 Max. clamping range O.D. ø90mm, I.D. ø84mm
 Repeat accuracy 0.015mm



Order No.	Model	Chuck Spec.	N.W.
50080-00	PF550-SC40	SC40	8.5kg
50080-01	PF550-SC04	SC04	7.8kg

50085 PF550M Precision Motor 3-Jaws Punch Former



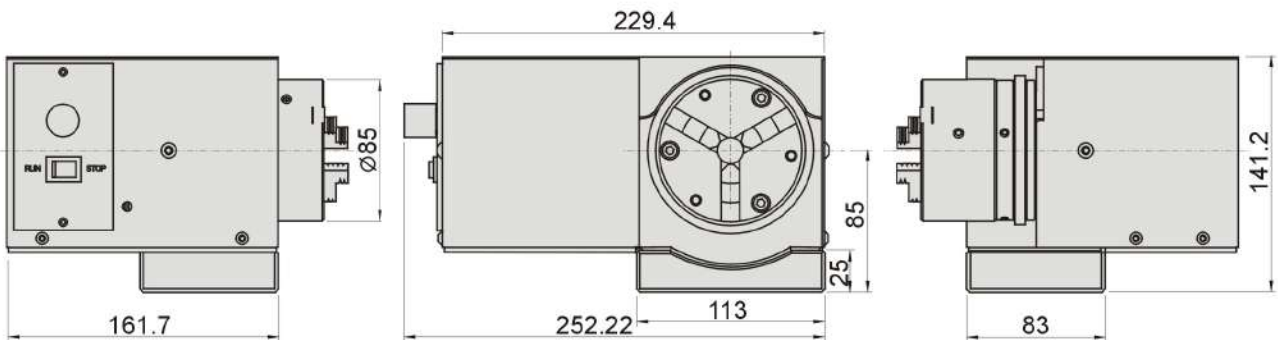
PUNCH FORMER

Features :

- ▶ PF550M have stronger structure leading lasting durability.
- ▶ 3-Jaw Chuck provide rapid clamping and it suitable for mass production, workpiece with round shaped can precisely & rapidly clamped.
- ▶ Due to accumulated tolerance when clamping different sizes of workpieces, special design in adjustment of horizontal and roundness for user own application.
- ▶ Jaw attachment can clamp workpeice with larger diameters.
- ▶ Motorised function prevent human fatigue when processing.
- ▶ Adopting high precision bearings and ball bearing to achieve higher stability and accuracy, it also makes longer lifecycle.

Main parameters:

Center height 85 ± 0.5mm
 Through hole diameters Ø 16mm
 Hole dia. of 3-Jaw Chuck Ø 16mm
 Min. clamping range O.D. Ø 2mm, I.D. Ø 24mm
 Max. clamping range O.D. Ø 70mm, I.D. Ø 64mm
 Motor : 110V/60Hz 50~550RPM
 Motor : 220V/50Hz 50~550RPM
 Rotational accuracy 0.003mm
 Repeat accuracy 0.015mm



Order No.	Model	Chuck Spec.	Voltage	N.W.
50085-110	PF550M	SC03	110V	17kg
50085-220			220V	17kg

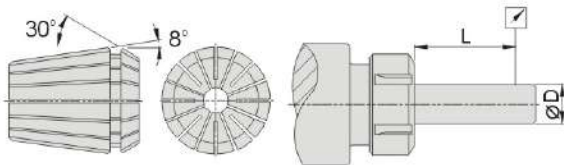
50095 PF650M Motorised Precision ER Collet Punch Former

PUNCH FORMER



Features :

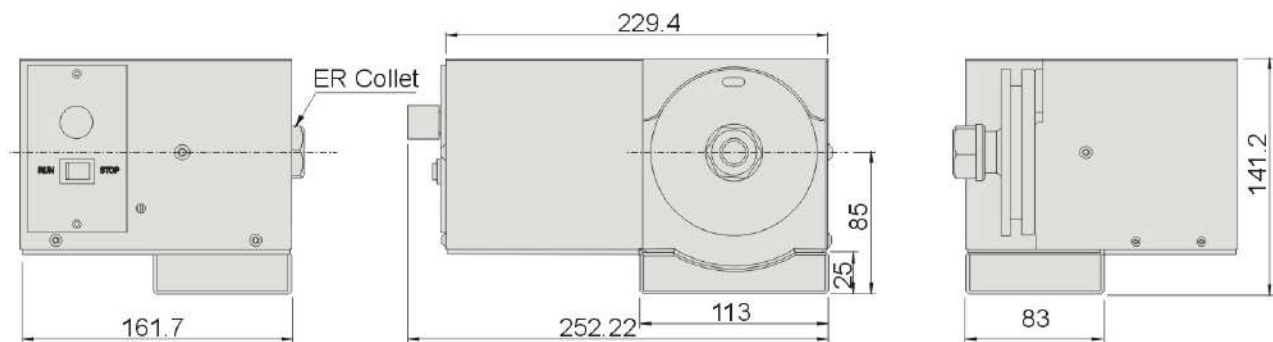
- ▶ PF650M has stronger structure leading lasting durability.
- ▶ Motorised function prevent human fatigue when processing.
- ▶ With ER collets, the flexible range of collet is 1mm.
- ▶ Capable collet clamping range: Min. \varnothing 2mm, Max. \varnothing 26mm
- ▶ PF650 can rapidly clamp the workpiece and achieving higher stability during processing, no need to adjust the center accuracy.
- ▶ Adopting high precision bearings and ball bearing to achieve higher stability and accuracy, it also makes longer lifecycle.



L	D	Accuracy
6	1.0-1.6	0.01
10	1.6-3.0	0.01
16	3.0-7.0	0.01
25	7.0-10.0	0.01
40	10.0-18.0	0.01
50	18.0-24.0	0.01
60	24.0-34.0	0.01

Main parameters:

- Center height 85 ± 0.5 mm
- Motor : 110V/60Hz 50~550RPM
- Motor : 220V/50Hz 50~550RPM
- Rotational accuracy 0.003mm



Order No.	Model	ER Collet spec.	Voltage	N.W.
50095-01-110	PF650M-ER20	3, 4, 6, 8, 10	110V	17kg
50095-01-220			220V	17kg
50095-02-110	PF650M-ER32	4, 8, 12, 16, 20	110V	18kg
50095-02-220			220V	18kg
50095-03-110	PF650M-ER40	6, 10, 16, 20, 25	110V	19kg
50095-03-220			220V	19kg

Punch Former

50300

PFH240

Precision Punch Former (Medium Type)



PAT:M421169
ZL 2010 2 0190858.6

N.W. 13.0kg

Features :

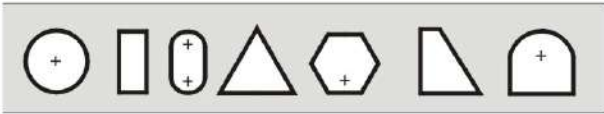
- ▶ PFH240 Precision Punch Former have stronger compact structure and long lasting durability.
- ▶ Suitable of application on surface grinding machine and capable of forming various shapes of punches as well as electrode.
- ▶ PFH240 has through hole design for longer punch & ejector pins to be clamped in processing.
- ▶ V-block clamping can accurately stabilize workpieces and vertical fine-tuning function can makes setting center easier.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.
- ▶ Stopper design in position slot and easier for precisely stabilize polygonal punches.
- ▶ Improvement in dust-proof and water resistance.



- Precisely ground screw rod for fine-tuning of V-block vertical movement.
- Two clamp plates on both side of V block helps the consistent movement.

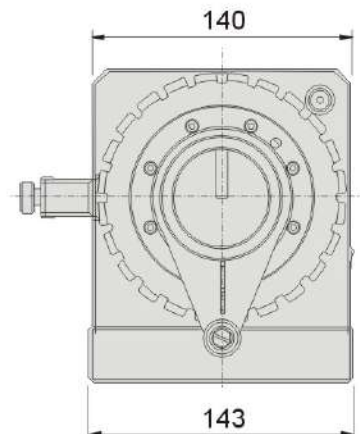
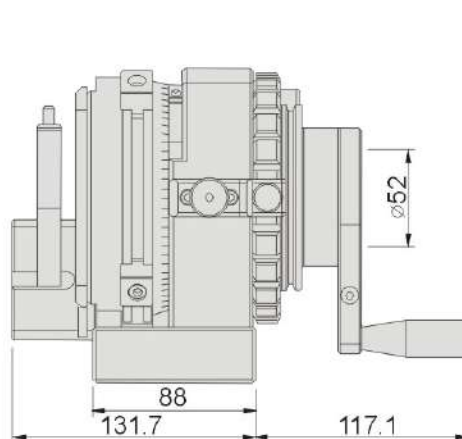
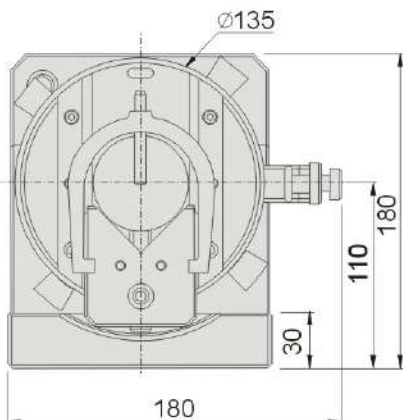
- ▶ Stoper design in position slot and easier for precisely stabilize polygonal punches.
- ▶ Improvement in dust-proof and water resistance.

Punch forming applications



Main parameters:

- Center height 110 ± 0.5mm
- Clamping dia. range of V-block Ø 5~50mm
- Travel of V-block 34mm
- Indexer tooth q'ty & accuracy 24, 15° ± 5"
- Through hole diameters Ø 52mm
- Clamping accuracy (50mm) 0.005mm



50350 PFH280 Precision Punch Former (Medium Type)

PAT:M421169
ZL 2010 2 0190858.6



N.W. 14.7kg



- Stopper block for horizontal movement.
- Two clamp plates on both side of V block helps the consistent movement.



Precisely ground screw rod for fine-tuning of V-block vertical movement.

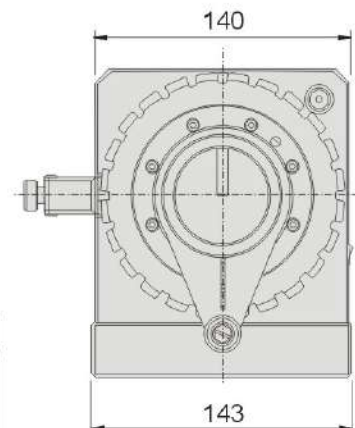
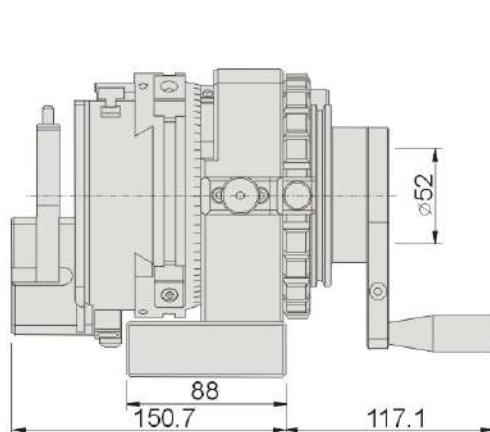
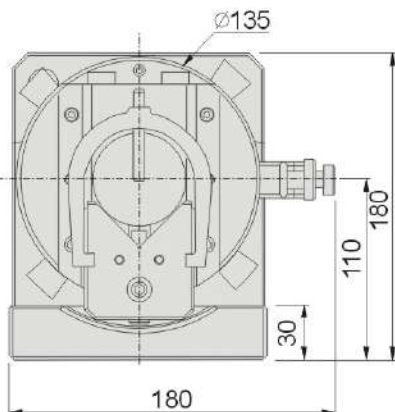
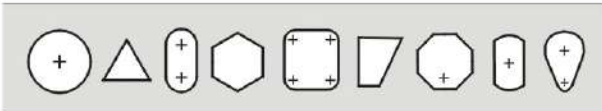
Features :

- ▶ PFH280 Precision Punch Former have stronger compact structure and long lasting durability.
- ▶ Suitable of application on surface grinding machine and capable of forming various shapes of punches as well as electrode.
- ▶ Due to its vertical & horizontal adjustment function, it is specially suitable for oval punch grinding.
- ▶ V-block clamping can accurately stabilize workpieces and vertical fine-tuning function can makes setting center easier.
- ▶ Adopting high precision double bearings in it's structure to achieve higher accuracy, rigidity and stability.
- ▶ Stopper design in position slot and easier for precisely stabilize polygonal punches.
- ▶ Improvement in dust-proof and water resistance.

Main parameters:

Center height	110 ± 0.5mm
Clamping dia. range of V-block	∅5~50mm
Travel of V-block	36mm
Indexer tooth q'ty & accuracy	24, 15° ± 5"
Through hole diameters	∅52mm
Clamping accuracy (50mm)	0.005mm

Punch forming applications



Punch Former

50500

PFH300

Precision Punch Former (Big Type)

PUNCH FORMER



PAT:M421169
ZL 2010 2 0190858.6

N.W. 23.5kg

Features :

- ▶ PFH300 Precision Punch Former have stronger compact structure and long lasting durability.
- ▶ Suitable of application on surface grinding machine and capable of forming various shapes of punches as well as electrode.
- ▶ PFH300 has through hole design for longer punch & ejector pins to be clamped in processing.
- ▶ V-block clamping can accurately stabilize workpieces and vertical fine-tuning function can makes setting center easier.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.
- ▶ Stopper design in position slot and easier for precisely stabilize polygonal punches.
- ▶ Improvement in dust-proof and water resistance.

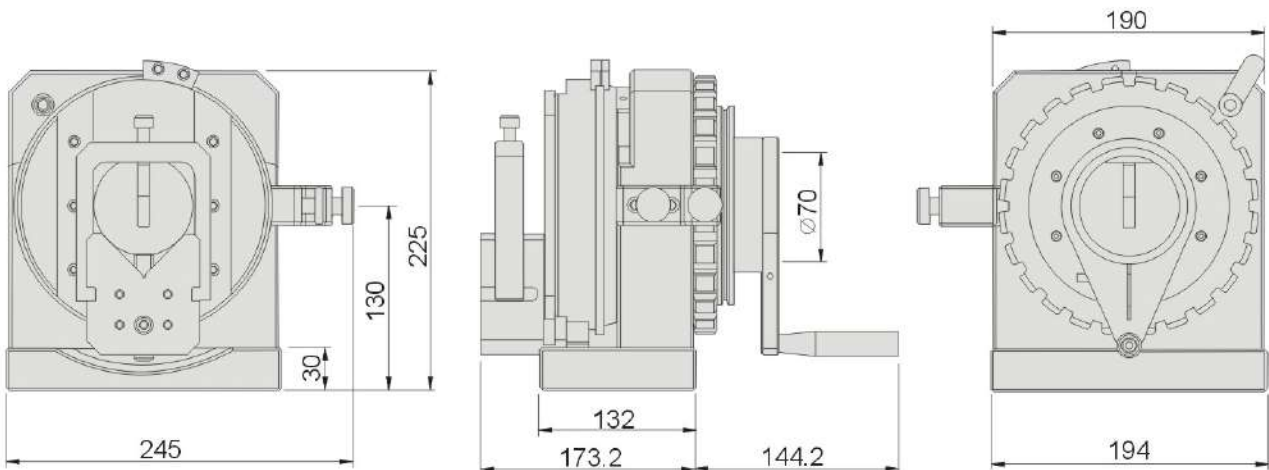
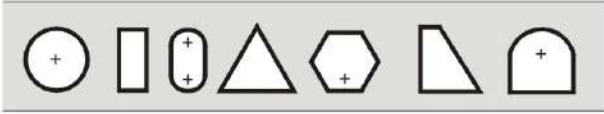


- Precisely ground screw rod for fine-tuning of V-block vertical movement.
- Two clamp plates on both side of V block helps the consistent movement.

Main parameters:

Center height $130 \pm 0.5\text{mm}$
 Clamping dia. range of V-block $\varnothing 3\sim 69.5\text{mm}$
 Travel of V-block 48mm
 Indexer tooth q'ty & accuracy $24, 15^\circ \pm 5''$
 Through hole diameters $\varnothing 70\text{mm}$
 Clamping accuracy (50mm) 0.005mm

Punch forming applications



50550 PFH500 Precision Punch Former (Big Type)



PAT:M421169
ZL 2010 2 0190858.6

N.W. 27kg



- Stopper block for horizontal movement.
- Screw rod for V block vertical movement.
- Release the screw when make adjustable and lock with slight force.



Precisely ground screw rod for fine-tuning of V-block movement.

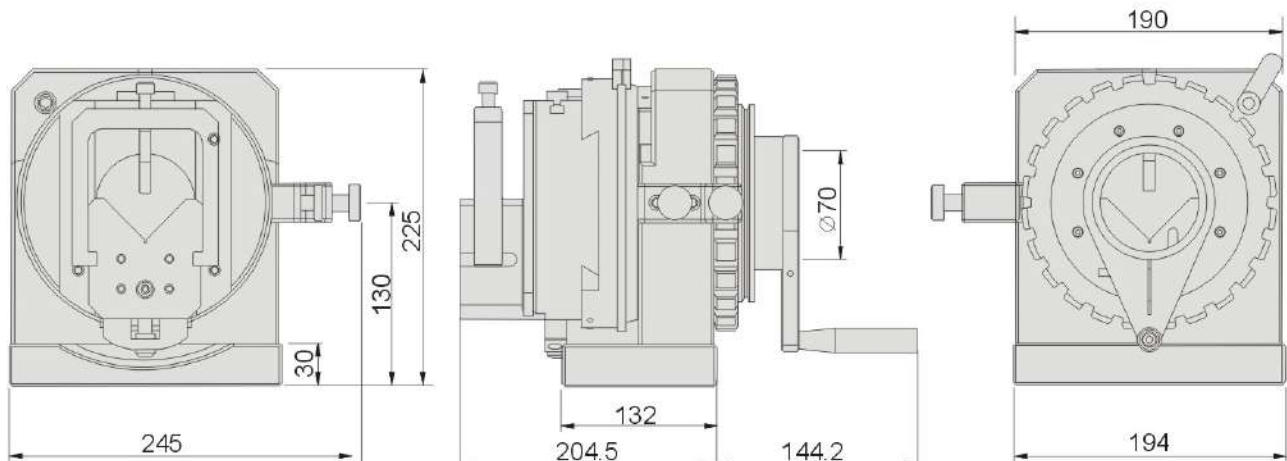
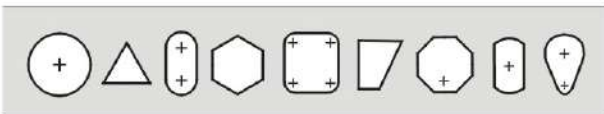
Features :

- ▶ PFH500 Precision Punch Former have stronger compact structure and long lasting durability.
- ▶ Suitable of application on surface grinding machine and capable of forming various shapes of punches as well as electrode.
- ▶ Due to its vertical & horizontal adjustment function, it is specially suitable for oval punch grinding.
- ▶ V-block clamping can accurately stabilize workpieces and vertical fine-tuning function can makes setting center easier.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.
- ▶ Stopper design in position slot and easier for precisely stabilize polygonal punches.
- ▶ Improvement in dust-proof and water resistance.

Main parameters:

- Center height $130 \pm 0.5\text{mm}$
- Clamping dia. range of V-block $\varnothing 3\sim 69.5\text{mm}$
- Travel of V-block 48mm
- Indexer tooth q'ty & accuracy $24, 15^\circ \pm 5''$
- Through hole diameters $\varnothing 70\text{mm}$
- Clamping accuracy (50mm) 0.005mm
- Slide plate horizontal movement $\pm 30\text{mm}$

Punch forming applications



PUNCH FORMER

Punch Former

50600 PFH600 Precision 3-Jaws Punch Former (Big Type)

PUNCH FORMER



PAT:M421169
ZL 2010 2 0190858.6

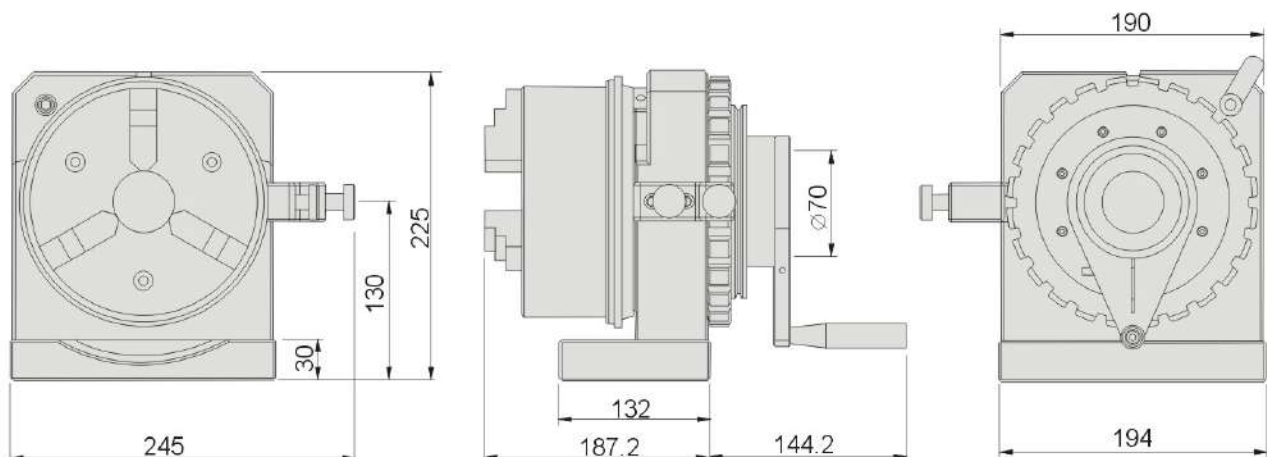
N.W. 27kg

Features :

- ▶ PFH600 have stronger structure leading lasting durability.
- ▶ PFH600 provide rapid clamping and it suitable for mass production, workpiece with round shaped can precisely & rapidly clamped.
- ▶ Due to accumulated tolerance when clamping different sizes of workpieces, special design in adjustment of for user own application.
- ▶ Further jaw attachment can clamp workpeice with larger diameters.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.

Main parameters:

Center height 130 ± 0.5mm
 Indexer tooth q'ty & accuracy 24, 15° ± 5"
 Through hole diameters Ø 70mm
 Hole dia. of 3-Jaw Chuck Ø 45mm
 Min. clamping range O.D. Ø 4mm, I.D. Ø 48mm
 Max. clamping range O.D. Ø 160mm, I.D. Ø 150mm
 Rotational accuracy 0.003mm
 Repeat accuracy 0.015mm



50650 PFH600M Motorised Precision 3-Jaws Punch Former (Big Type)



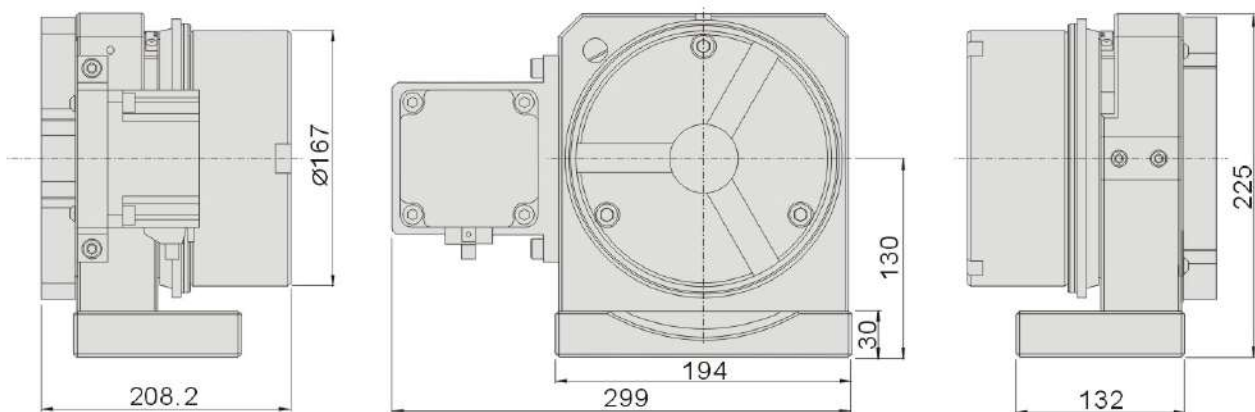
PUNCH FORMER

Features :

- ▶ Motorised function prevent human fatigue when processing.
- ▶ PFH600M provide rapid clamping and it suitable for mass production, workpiece with round shaped can precisely & rapidly clamped.
- ▶ Due to accumulated tolerance when clamping different sizes of workpieces, special design in adjustment for user own application.
- ▶ Further jaw attachment can clamp workpeice with larger diameters.
- ▶ Adopting high precision double bearings in its structure to achieve higher accuracy, rigidity and stability.

Main parameters:

Center height 130 ± 0.5mm
 Indexer tooth q'ty & accuracy 24, 15° ± 5"
 Through hole diameters Ø 70mm
 Hole dia. of 3-Jaw Chuck Ø 45mm
 Min. clamping range O.D. Ø 4mm, I.D. Ø 48mm
 Max. clamping range O.D. Ø 160mm, I.D. Ø 150mm
 Motor : 110V/60Hz 50~550RPM
 Motor : 220V/50Hz 50~550RPM
 Rotational accuracy 0.003mm
 3-Jaw chuck clamping repeat accuracy .. 0.015mm



Order No.	Model	Chuck Spec.	Voltage	N.W.
50650-110	PFH600M	SC06	110V	30kg
50650-220			220V	30kg

Center Punch Former

50700 GPFE Center Punch Former

PUNCH FORMER

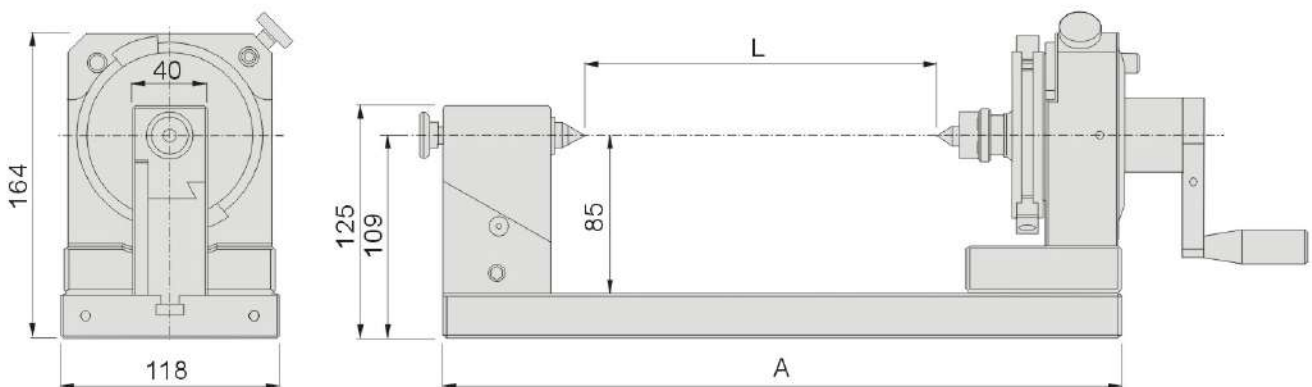


Features :

- ▶ Center Punch Former apply Live Center at both sides to clamp punch to achieve concentricity.
- ▶ Live center stabilize the processing and achieve higher accuracy.
- ▶ It is mainly apply on bushes and cylinder which needs precision cylindrical grinding on surface grinding machines.

Main parameters:

Center height without base 85mm
 Center height with base 109mm
 Indexer tooth quantity & accuracy 24, 15° ± 10"
 Live Center clamping range 0~450mm
 Material SKS3, HRC60~62°
 Roundness 0.002mm
 Parallelism 0.002mm/100mm
 Squareness 0.002mm/100mm



Unit:mm

Order No.	Model	A	L	Rotary Angle	N.W.
50700-15	GPFE150	375	0~150	360°	20kg
50700-25	GPFE250	475	0~250		23kg
50700-35	GPFE350	575	0~350		26kg
50700-45	GPFE450	675	0~450		29.5kg

50750 GPFEM Motorised Center Punch Former



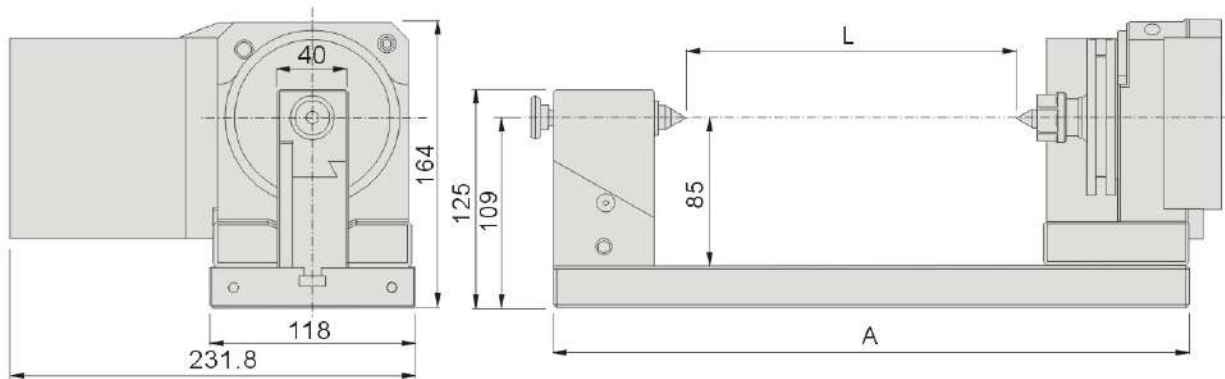
Features :

- ▶ Center Punch Former apply Live Center at both sides to clamp punch to achieve concentricity.
- ▶ Motorised function prevent human fatigue when processing.
- ▶ Live center stabilize the processing and achieve higher accuracy.
- ▶ It is mainly apply on bushes and cylinder which needs precision cylindrical grinding on surface grinding machines.



Main parameters:

Center height without base 85mm
 Center height with base 109mm
 Clamping range 0~450mm
 Motor output, Voltage 15W, IPH, 110/220V
 Motor speed 50/60HZ50~550RPM
 Material of Punch Former SKS3, HRC60~62°
 Roundness 0.002mm
 Parallelism 0.002mm/100mm
 Squareness 0.002mm/100mm



Unit:mm

Order No.	Model	A	L	Rotary Angle	N.W.
50750-15-110	GPFE150M	375	0~150	360°	23kg
50750-15-220					
50750-25-110	GPFE250M	475	0~250		
50750-25-220					
50750-35-110	GPFE350M	575	0~350		
50750-35-220					
50750-45-110	GPFE450M	675	0~450	32.5kg	
50750-45-220					

Center Punch Former

50800 GPFC 3-Jaws Center Punch Former



Features :

- ▶ 3-Jaw Center Punch Former apply 3-Jaw Chuck to clamping workpieces with rapid and easy loading process.
- ▶ It is capable of grinding long punches which cannot be processing by conventional Punch Formers.
- ▶ Live center stabilize the processing and achieve higher accuracy.
- ▶ It is mainly apply on bushes and cylinder which needs precision cylindrical grinding on surface grinding machines.

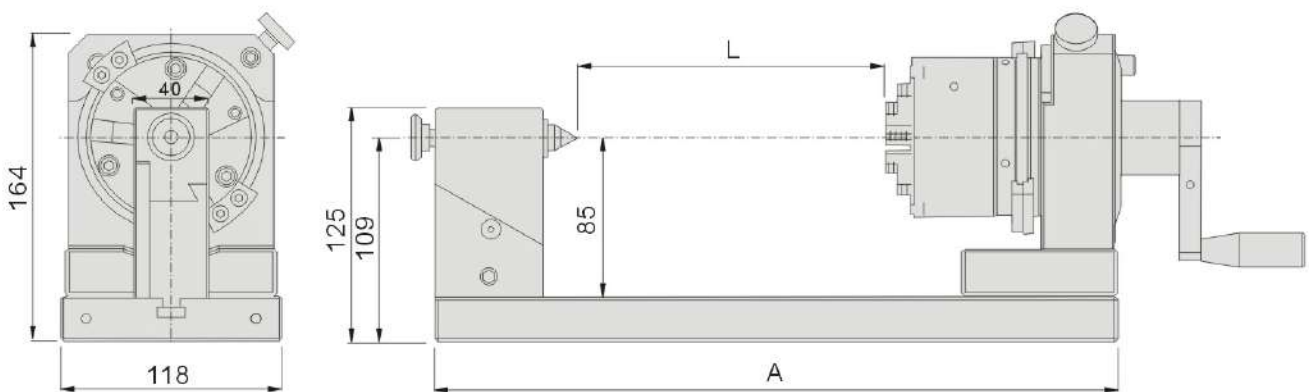
Material:

Punch Former:SKS3 HRC60~62°

3-Jaw Chuck:Meehanite cast iron

Main parameters:

Center height without base 85mm
 Center height with base 109mm
 Indexer tooth quantity & accuracy 24, 15° ± 10"
 Hole dia. of 3-Jaw Chuck Ø 16mm
 Diameter of 3-Jaw Chuck..... Ø 85mm
 Roundness 0.002mm
 Parallelism 0.002mm/100mm
 Squareness 0.002mm/100mm



Unit:mm

Order No.	Model	O.D. Range	I.D. Range	A	L	Rotary Angle	N.W.
50800-15	GPFC150	ø2~70	ø24~64	375	0~150	360°	20kg
50800-25	GPFC250			475	0~250		23kg
50800-35	GPFC350			575	0~350		26kg
50800-45	GPFC450			675	0~450		29.5kg

50850 GPFCM Motorised 3-Jaws Center Punch Former



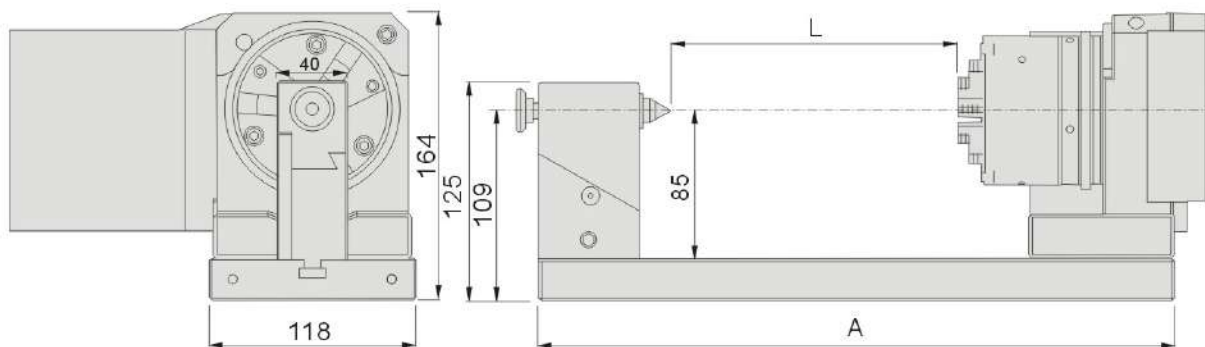
Material:
 Punch Former: SKS3 HRC60~62°
 3-Jaw Chuck: Meehanite cast iron

Features :

- ▶ 3-Jaw Center Punch Former apply 3-Jaw Chuck to clamping workpieces with rapid and easy loading process.
- ▶ Motorised function prevent human fatigue when processing.
- ▶ Live center stabilize the processing and achieve higher accuracy.
- ▶ It is mainly apply on bushes and cylinder which needs precision cylindrical grinding on surface grinding machines.

Main parameters:

Center height without base 85mm
 Center height with base 109mm
 Motor output, Voltage 15W 110/220V
 Motor speed 50/60HZ 50~550RPM
 Hole dia. of 3-Jaw Chuck Ø 16mm
 Diameter of 3-Jaw Chuck Ø 85mm
 Roundness 0.002mm
 Parallelism 0.002mm/100mm
 Squareness 0.002mm/100mm



Unit:mm

Order No.	Model	O.D. Range	I.D. Range	A	L	Rotary Angle	N.W.		
50850-15-110	GPFC150M	Ø2~70	Ø24~64	375	0~150	360°	23kg		
50850-15-220					0~250		26kg		
50850-25-110	GPFC250M			475	0~350		29kg		
50850-25-220				575	0~450		32.5kg		
50850-35-110	GPFC350M			675					
50850-35-220									
50850-45-110	GPFC450M								
50850-45-220									

Punch Former

51000 PF300 Punch Former (big)



N.W. 21.3kg

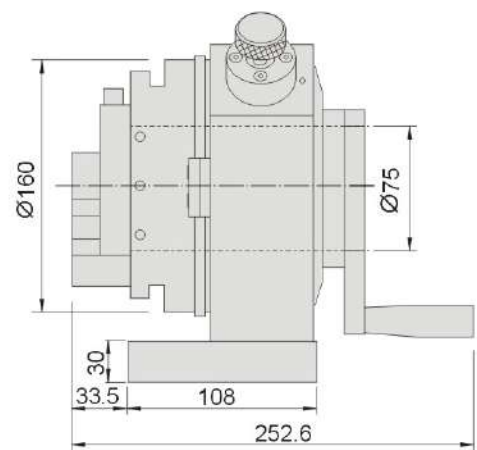
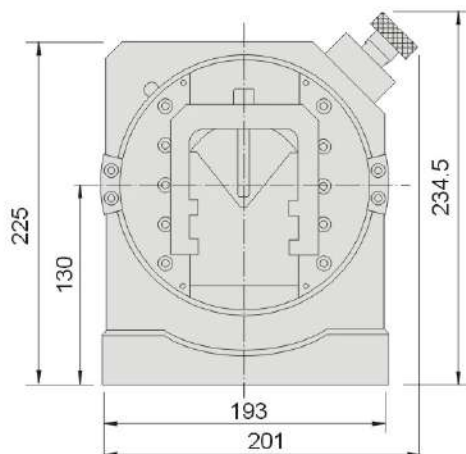
PUNCH FORMER

Features :

- ▶ PF300 Punch Former is special designed for larger punch under $\varnothing 70$.
- ▶ Suitable of forming various shapes of punches as well as electrode.
- ▶ PF300 has through hole design for longer punch & ejector pins to be clamped in processing.
- ▶ V-block clamping can accurately stabilize workpieces and vertical fine-tuning function can makes setting center easier.

Main parameters:

Center height	130mm
Clamping dia. range of V-block	$\varnothing 70$ mm
Travel of V-block.....	60mm
Indexer tooth q'ty & accuracy	24, $15^\circ \pm 10'$
Through hole diameters	$\varnothing 75$ mm
Clamping accuracy (50mm)	0.008mm



51050 PF500 Punch Former (big)



N.W. 23.3kg

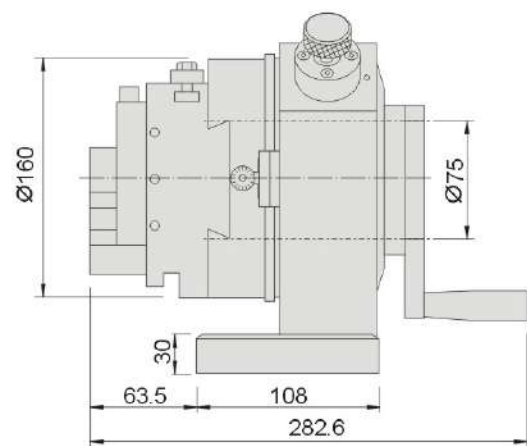
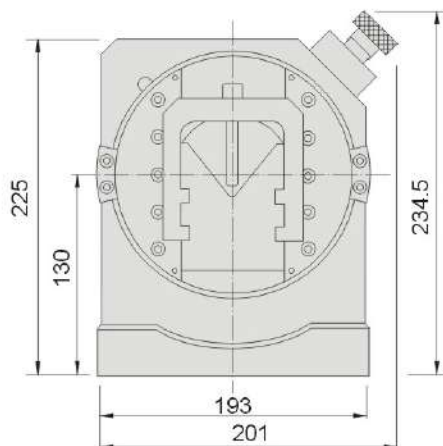
PUNCH FORMER

Features :

- ▶ PF500 Punch Former is special designed for larger punch.
- ▶ Due to its vertical & horizontal adjustment function, it is especially suitable for oval punch grinding as well as electrode.
- ▶ V-block clamping can accurately stabilize workpieces and vertical fine-tuning function can makes setting center easier.

Main parameters:

Center height	130mm
Clamping dia. range of V-block	Ø70mm
Travel of V-block	60mm
Slide plate horizontal movement	±25mm
Indexer tooth q'ty & accuracy	24 .15°±10'
Clamping accuracy (50mm)	Ø75mm
Through hole diameters	0.008mm



Punch Former

51080

PF600

3-Jaws Punch Former (big)



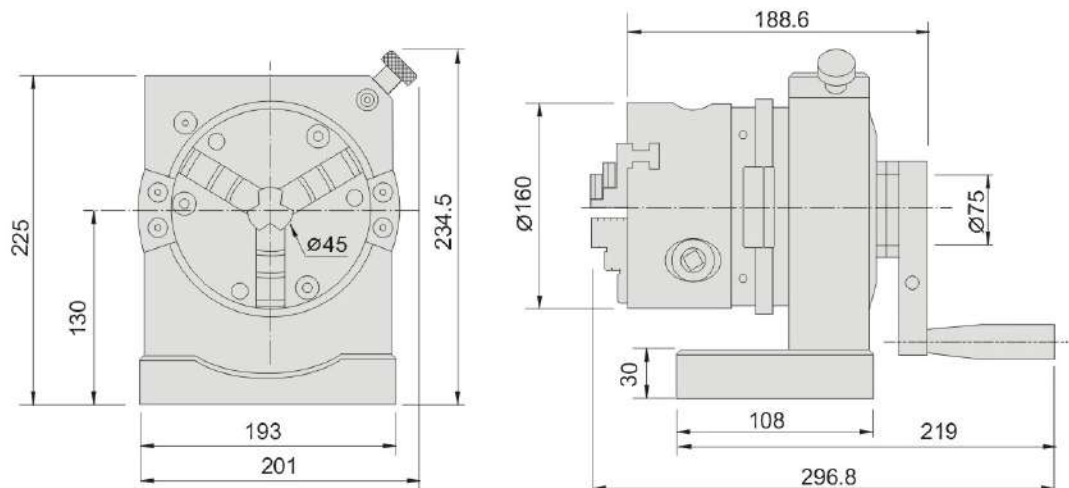
N.W. 24.3kg

Features :

- ▶ PF600 provide rapid clamping and it suitable for mass production, workpiece with round shaped can precisely & rapidly clamped.
- ▶ Due to accumulated tolerance when clamping different sizes of workpieces, special design in adjustment of horizontal and roundness for user own application.
- ▶ Further jaw attachment can clamp workpeice with larger diameters.

Main parameters:

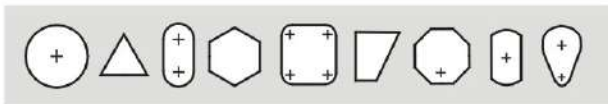
Center height	130mm
Indexer tooth q'ty & accuracy	24, $15^{\circ} \pm 10''$
Through hole diameters	$\varnothing 45\text{mm}$
Hole dia. of 3-Jaw Chuck	$\varnothing 45\text{mm}$
3-Jaw chuck repeat accuracy	0.015mm
Min. clamping range: Outer dia.....	$\varnothing 4\text{mm}$
Inner dia.....	$\varnothing 48\text{mm}$
Max. clamping range: Outer dia.....	$\varnothing 160\text{mm}$
Inner dia.....	$\varnothing 150\text{mm}$



51100 PFA **Punch Former (Dual)**



N.W. 8.6kg

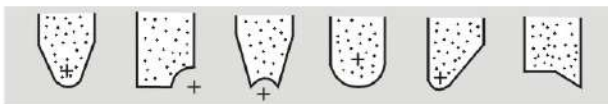


Punch Forming Applications

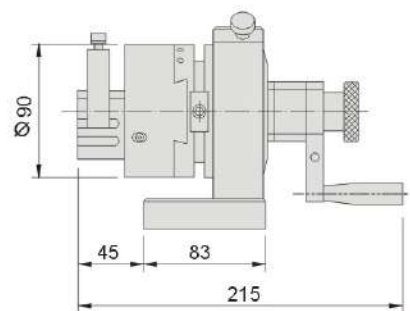
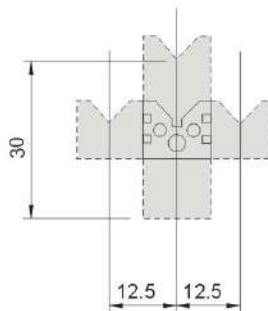
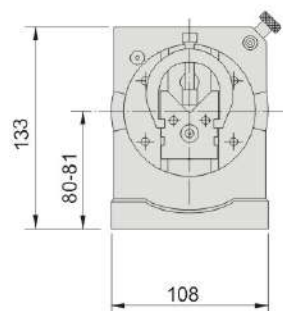
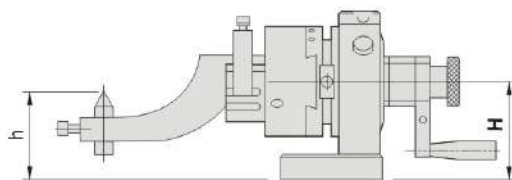


Crank

Diamond pin is not included



Wheel Dressing Applications



Features :

- ▶ Suitable for precision grinding different kinds of punches and electrodes of EDM in a surface grinding machine.
- ▶ Thanks to its vertical & horizontal movement allows oval punch forming.
- ▶ V-block needs to be adjusted to center depending on different dia. Of the workpieces in order to achieve 0.005mm accuracy.
- ▶ Standard accessory; crank for dressing grinding wheel into various cross sections of flat or curved shaoes.

Main parameters:

- Center height 80 ~ 81mm
- Clamping dia. range of V-block Ø 4 ~ 30mm
- Travel of V-block 30mm
- Slide plate horizontal movement ±12.5mm
- Indexer tooth q'ty & accuracy 24, 15° ±10"
- Clamping accuracy (50mm) 0.005mm
- Capable wheel size of dressing Ø 200mm
- Max. radius dressing Convex R48mm
- Concave R100mm

Calculation Formula:

- Dressing convex arc $h=H-R$
- Dressing concave arc $h=H+R$
- h: distance from tip of diamond to base of Punch Former
- H: Center height of Punch Former
- R: Radius of the arc to be dress

Punch Former

51150 PFB Punch Former

PUNCH FORMER



Crank
N.W. 0.8kg
Diamond pin is not included

N.W. 7.6kg

Features :

- ▶ PFB has same function as PFA except for the eccentric horizontal movement due to its through hole design for longer ejector pins processing capability.
- ▶ Standard accessory; crank for dressing grinding wheel into various cross sections of flat or curved shaes.
- ▶ Optional accessory PFB1 to achieve angular wheel dressing.
- ▶ Optional accessory SVB to achieve min. $\varnothing 0.5\text{mm}$ clamping capability.

Main parameters:

Center height	80 – 81mm
Clamping dia. range of V-block.....	$\varnothing 4 \sim 30\text{mm}$
Travel of V-block	30mm
Indexer tooth q'ty & accuracy	24, $15^\circ \pm 10''$
Clamping accuracy (50mm).....	0.005mm
Through hole dia.	$\varnothing 30\text{mm}$
Capable wheel size of dressing	$\varnothing 200\text{mm}$
Max. radius dressing Convex	R48mm
Concave	R100mm

51150-01
PFB1

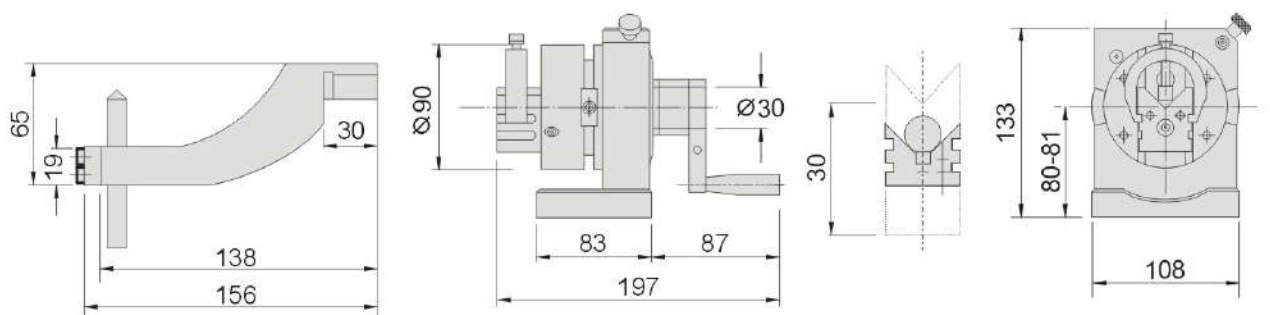


N.W. 0.6kg

51150-02
SVB



N.W. 0.2kg



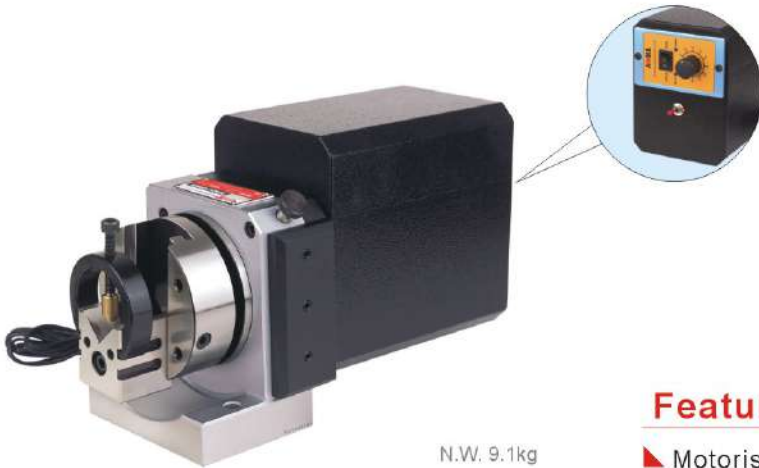
Punch forming applications

Grinding wheel dressing application



51160 PFBM Motorised Punch Former

PUNCH FORMER



N.W. 9.1kg

Features :

- ▶ Motorised function prevent human fatigue when processing.
- ▶ Increase efficiency when processing punches.

Main parameters:

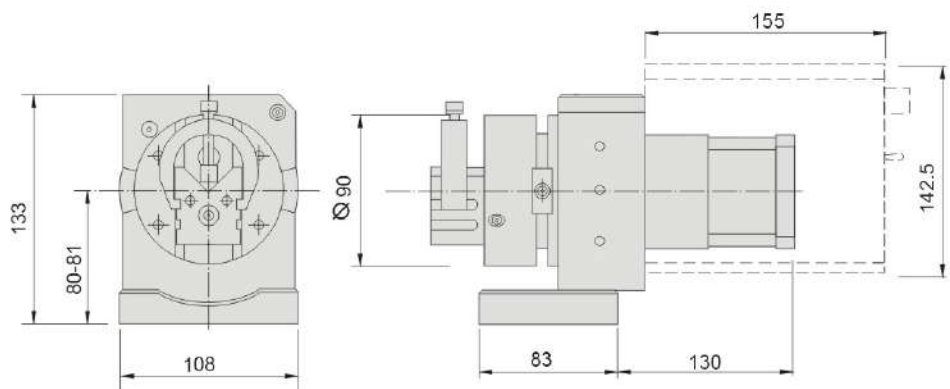
- Center height 80 ~ 81mm
- Clamping diameter in V-slot \varnothing 4 ~ 30mm
- Travel of V-block 25mm
- Clamping accuracy (50mm) 0.005mm
- Roller driving motor 110V/60HZ 50~300rpm
- Roller driving motor 220V/50HZ 50~300rpm



View without dust cover

Note:

Variable speed from 1 to 100 ratio, when 100 is set the top speed is 300rpm, when set on 100 rpm, the panel is set approx. 30 ratio.



Order No.	Model	Volts
51160-110	PFBM	AC110V
51160-220		AC220V

Punch Former

51200 PFC 3-Jaw Punch Former



N.W. 7.6kg

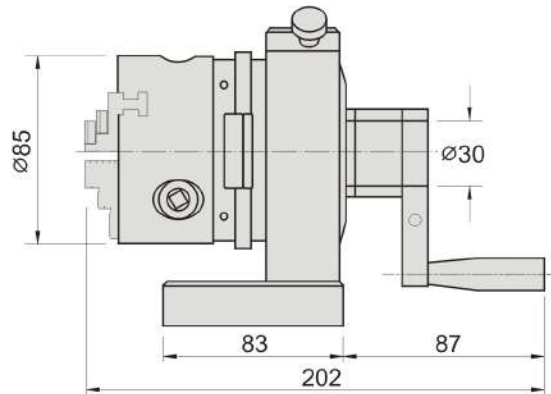
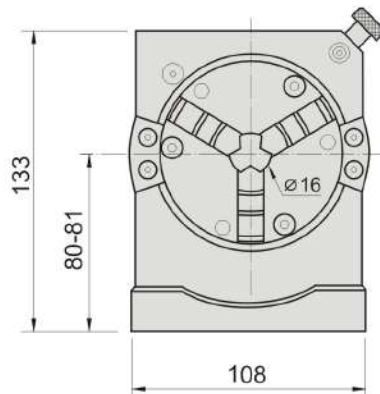


Features :

- ▶ Precision 3-Jaw Chuck provide rapid clamping and it suitable for mass production.
- ▶ Due to the accumulated tolerance incurred, there is design for adjustment function for users, both horizontal and roundness.
- ▶ Further reversed jaw attachment provides capability of clamping larger workpeice.

Main parameters:

Center height	80 ~ 81mm
Indexer tooth q'ty & accuracy.....	24,15° ± 10"
Through hole diameters.....	∅30 mm
Rotational accuracy.....	0.003mm
Repeat accuracy.....	0.015mm
Hole dia. of 3-Jaw Chuck	∅16mm
Min. clamping range	O.D. ∅2mm, I.D. ∅24mm
Max. clamping range	O.D. ∅70mm, I.D. ∅64mm



51210 PFCM Motorised 3-Jaw Punch Former



N.W. 10.1kg



View without dust cover

Features :

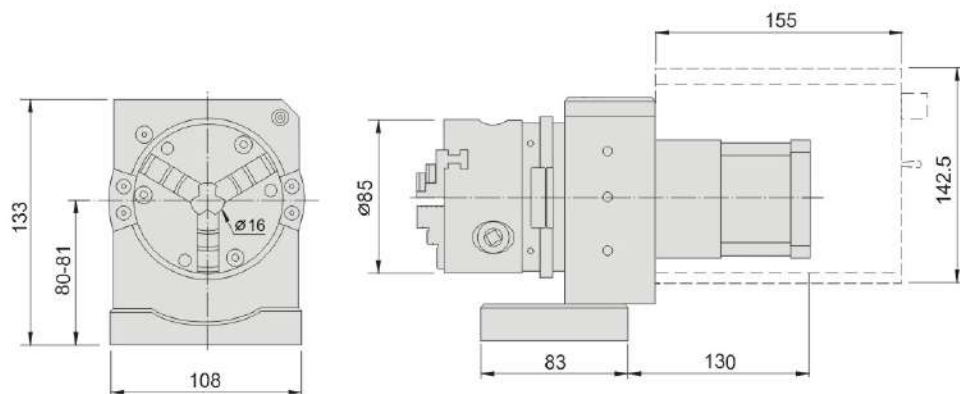
- ▶ Motorised function prevent human fatigue when processing.
- ▶ Increase efficiency when processing punches.

Main parameters:

Center height	80 ~ 81mm
Rotational accuracy	0.003mm
Repeat accuracy	0.015mm
Hole dia. of 3-Jaw Chuck	∅ 16mm
Min. clamping range	O.D. ∅ 2mm, I.D. ∅ 24mm
Max. clamping range	O.D. ∅ 70mm, I.D. ∅ 64mm
Motor : 110V/60Hz	50 ~ 300 RPM
Motor : 220V/50Hz	50 ~ 300 RPM

Note:

Variable speed from 1 to 100 ratio, when 100 is set the top speed is 300rpm, when set on 100 rpm, the panel is set approx. 30 ratio.



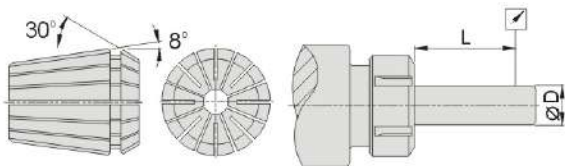
Order No.	Model	Volts
51210-110	PFCM	AC110V
51210-220		AC220V

冲子成型器 Punch Former

50090

PF650

筒夾式ER冲子成型器 ER Collet Punch Former



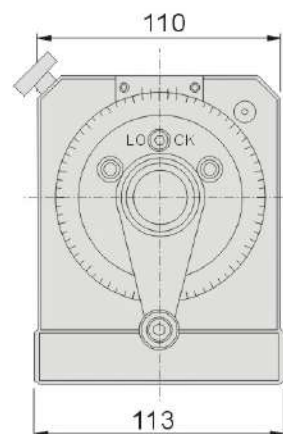
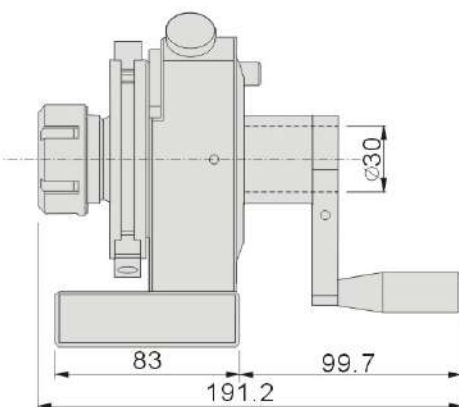
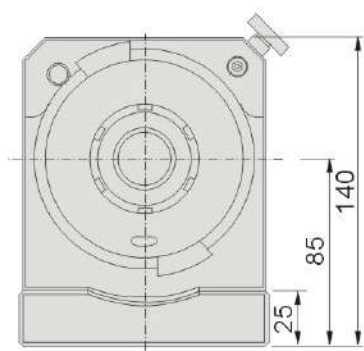
特點:

- ▶ PF650筒夾式ER冲子成型器具較佳結構之強度與耐用性。
- ▶ 筒夾式冲子成型器附有ER筒夾,筒夾可伸縮使用範圍1毫米。
- ▶ 筒夾夾持範圍:最小夾持 $\varnothing 2$ 毫米,最大夾持 $\varnothing 26$ 毫米。
- ▶ 本機可快速且穩固的夾持工件,加工時可更穩定的使用,且不必調整中心度即可使用。
- ▶ 採用高精密雙組軸承的主軸設計,以達到高精密及穩定性。並有傳統型數倍以上的壽命。

L	D	精度
6	1.0-1.6	0.01
10	1.6-3.0	0.01
16	3.0-7.0	0.01
25	7.0-10.0	0.01
40	10.0-18.0	0.01
50	18.0-24.0	0.01
60	24.0-34.0	0.01

主要參數

中心高..... $85 \pm 0.5\text{mm}$
 分度盤齒數、精度..... $24, 15^\circ \pm 10''$
 貫穿孔直徑..... $\varnothing 30\text{mm}$
 主座回轉精度..... 0.003mm



訂購編號 Order No.	型號 Model	筒夾規格	重量 N.W.
50090-01	PF650-ER20	3, 4, 6, 8, 10	5.5kg
50090-02	PF650-ER32	4, 8, 12, 16, 20	6.5kg
50090-03	PF650-ER40	6, 10, 16, 20, 25,	6.6kg

51260 PFDM Motorised ER Collet Punch Former

PUNCH FORMER



View without dust cover



ER40 ER32 ER16

Features :

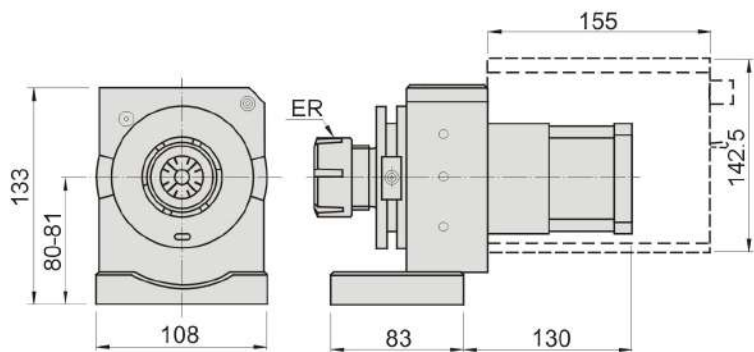
- ▶ Motorised function prevent human fatigue when processing.
- ▶ With ER collets, the flexible range of collet is 1mm.
- ▶ Clamping under 4mm apply ER16 collet.
- ▶ PFDM can rapidly clamp the workpiece and achieving higher stability during processing, no need to adjust the center accuracy.
- ▶ This model is compatible with various ER collets such as ER16, ER32, ER40 etc...

Main parameters:

Center height 80 ~ 81mm
 Motor : 110V/60Hz 50 ~ 300 RPM
 Motor : 220V/50Hz 50 ~ 300 RPM

Note:

Variable speed from 1 to 100 ratio, when 100 is set the top speed is 300rpm, when set on 100 rpm, the panel is set approx. 30 ratio.



Order No.	Model	Collet Size	Volts	N.W.
51260-16-110	PFDM-ER16	2、3、4、6、8	AC110V	8.2kg
51260-16-220			AC220V	
51260-32-110	PFDM-ER32	4、8、12、16、20	AC110V	9.2kg
51260-32-220			AC220V	
51260-40-110	PFDM-ER40	6、10、16、20、25	AC110V	10.2kg
51260-40-220			AC220V	

Punch Former

51300

SPF50

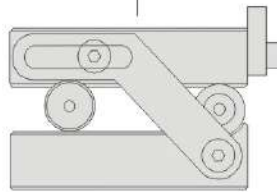
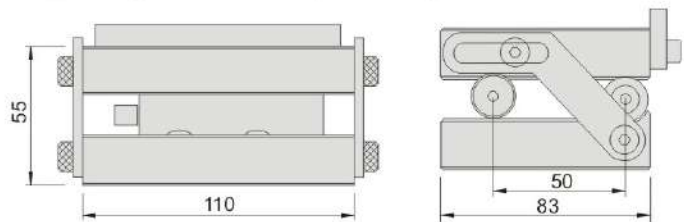
Sine Plate for Punch Former



Features :

- ▶ SPF50 Sine Plate is designed for applying on PFA, PFB, PFC & PFD to make sine angles for processing workpiece.
- ▶ Hardness:HRC55°
- ▶ Accuracy:within 0.005mm
- ▶ Max. angle is 55°
- ▶ Gauge block for angle setting refer to 55070.

N.W. 3.3kg



Sine Punch Former



**51300-01
SPFB**



**51300-02
SPFC**

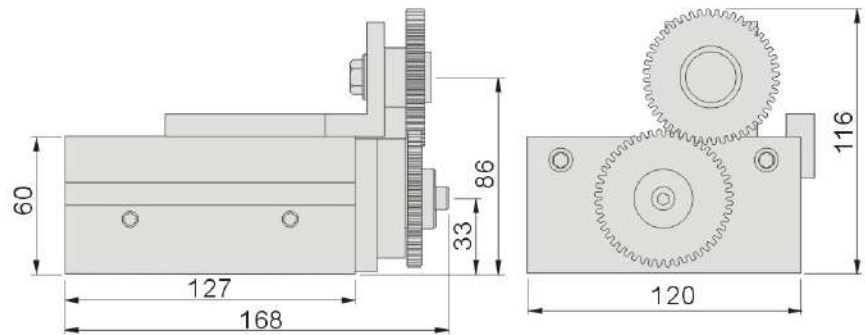


**51300-03/04/05
SPFD-ER16/32/40**

51320 GTF >> Replaceable type Thread Grinding Slider

Features :

- ▶ GTF Sine Plate is designed for applying on Punch Formers (PFB, PFC & PFD) to make thread grinding.
- ▶ Depending the thread pitch needs, choosing appropriate accessories. (Pitch 0.5/0.7/0.8/1.0/1.25/1.5/1.75/2.0).
- ▶ Standard accessory: P 1.0, and two extra thread bars from abovementioned spec. , Dust proof cover is also included.
- ▶ Custom made thread bar is available.



Application examples:



Thread Bars



Examples:



N.W. 7.6kg

GTF 51320

Thread Grinding Slider.



51320-01 GTFB

N.W. 15.2kg



51320-02 GTFC

N.W. 15.2kg



51320-03/04/05 GTFD-ER16/32/40

N.W. 13.2kg
14.2kg
15.2kg



Punch Former

51450

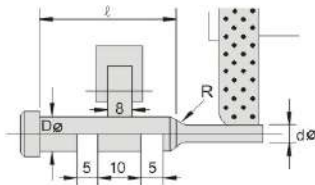
PGA

Punch Grinder



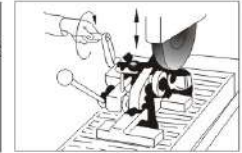
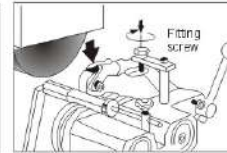
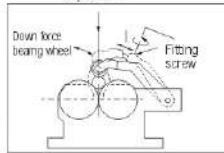
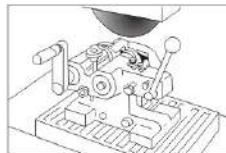
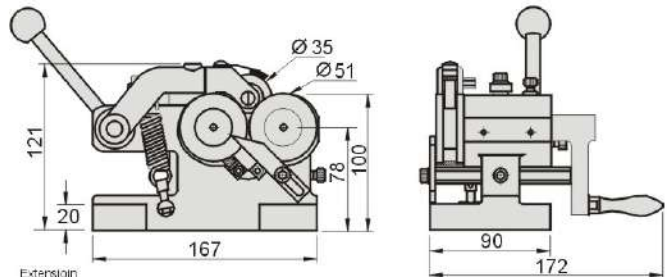
PAT: 208219
ZL 02 2 52581.5

N.W. 5.6kg



Features :

- ▶ PGA can be applied on surface grinder and automatically find concentricity for cylindrical grinding.
- ▶ The rollers can be used to adjust the workpiece before grinding.
- ▶ Use screw pressure for firm holding as shown in the picture for heavy grinding.
- ▶ Accuracy of roller is within 0.005mm. It can grind punches of outside diameter from 1.5 to 25mm, extended grinding length is within 5-35mm.



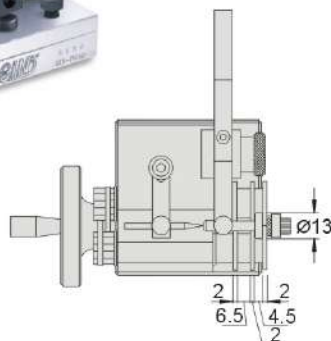
51500

PGAS

Punch Grinder

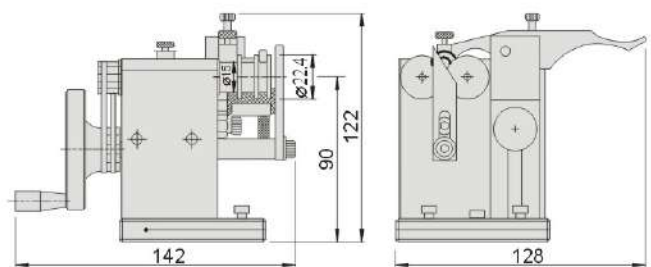


N.W. 2.5kg



Features :

- ▶ PGAS can be applied on surface grinder and automatically find concentricity for cylindrical grinding from Ø0.5 to Ø10mm, for longer workpiece job, refer to 55441 PGCF model.
- ▶ For measuring concentricity purpose, PGAS can measure from Ø0.5 to Ø25mm with accuracy 0.003mm.



51550 PGAM Motorised Punch Grinder



N.W. 10.2kg

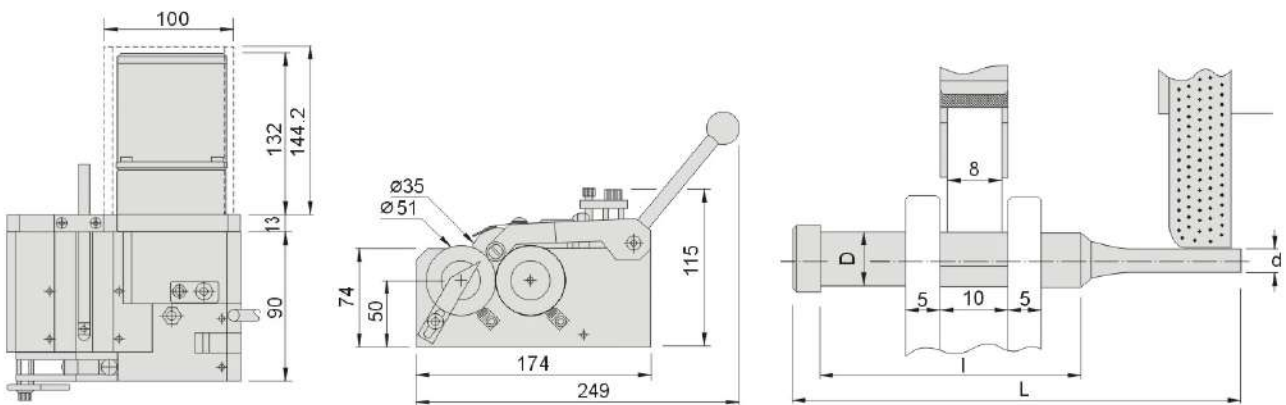
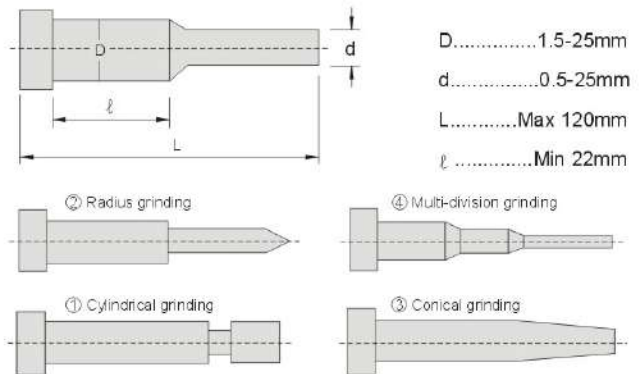
Features :

- ▶ Motor Punch Grinder just by putting on surface grinding machine.
- ▶ No center alignment necessary .Just put work on rollers.
- ▶ Portable with single hand, thus easily set on grinding.
- ▶ With rollers motor-driven attention can be concentrated on table wheel feeds.
- ▶ Double roller unit available for long pin or punch grinding.
- ▶ It can be used with magnetic sine plate to grind various angle profile punch.



Main parameters:

Length of Workpiece	20-120mm
Outside Grinding Length	5-35mm
Grinding Diameter	Ø1.5-Ø25mm
Accuracy.....	0.005mm
Roller driving motor 110V/60HZ	129rpm
Roller driving motor 220V/50HZ	108rpm



Order No.	Model	Volts
51550-110	PGAM	AC110V 1Phase
51550-220		AC220V 1Phase

Wheel Dresser

52100

WD165

Universal Wheel Dresser

PAT: 156082
ZL 99 2 11126.9



N.W. 6.6kg

Order No.	Model	Spec
52100-11	WD165	Inch
52100-12		Metric

Features :

- ▶ Mode WD165 Universal Wheel Dresser Adaptable on surface grinding machine and universal tool grinder for dressing grinding wheels into various cross sections of flat or curved shapes.
- ▶ Diamond pin is not included.

Calculation Formulars

$$H=L+R$$

To dress convex arc surface : $H=L+R$

To dress concave arc surface : $H=L-R$

H: distance between outer generating lines of two locating pins.

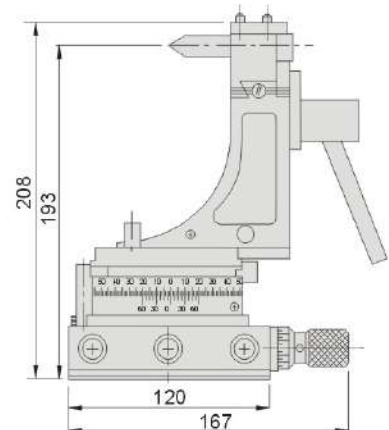
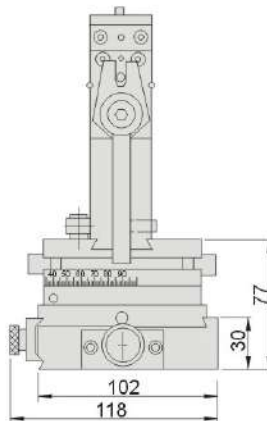
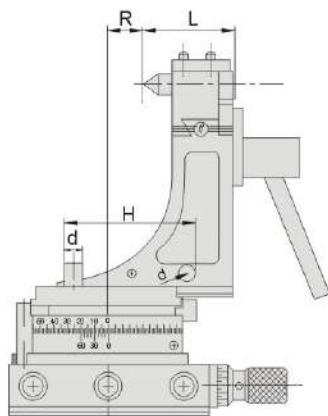
R: Radius of the arc surface to be dressed.

L: distance from tip of diamond cutter to base plate

Main parameters:

- Center height 193mm
- Measuring guide diameter $\varnothing 10\text{mm}$
- Max. swing distance of diamond cutter..... $\pm 14\text{mm}$
- Max. wheel diameter $\varnothing 205\text{mm}$
- Reading accuracy of turret index 5'
- Max. translation of feed 25mm
- Feed per division of handle scale 0.01mm
- Max.dressing convex arc 50R ,concave arc 0~100

Wheel Dressing Applications



52150 RDA Radius and Angle Dresser

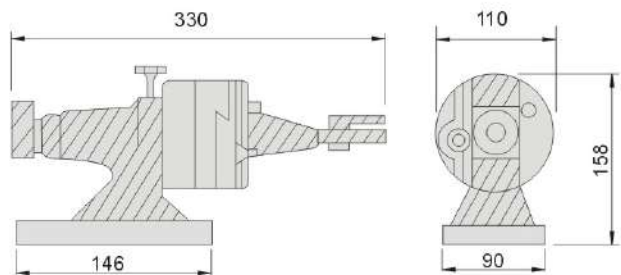


N.W. 10.5kg



Features :

- ▶ Automatic return to zero, by applying with gauge block and you can get the desire concave and convex angle.
- ▶ Max. convex R45mm, Max concave R100mm, Max horizontal movement is 65mm. Max.applicable wheel dressing is \varnothing 350mm



52200 RDB Radius and Angle Dresser

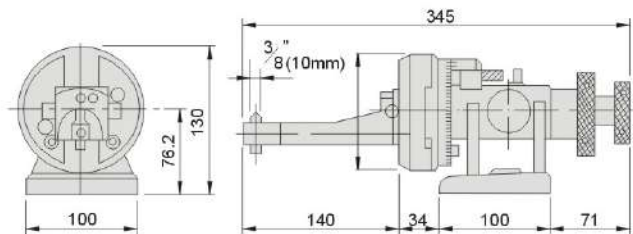


N.W. 8.5kg



Features :

- ▶ RDB Max. convex R45mm, Max concave R100mm, Max horizontal movement is 65mm. Max.applicable wheel dressing is \varnothing 325mm



52250 RDC Radius and Angle Dresser

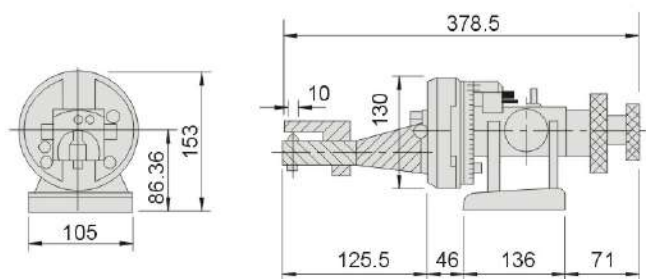


N.W. 9.5kg



Features :

- ▶ RDC Max. convex R60mm, Max concave R150mm, Max horizontal movement is 90mm.
- ▶ Max.applicable wheel dressing is \varnothing 279mm



WHEEL DRESSER

Wheel Dresser

52300

KT50

Visual Radius Angle Dresser

WHEEL DRESSER

PAT: 160112
ZL 99 2 11127.7



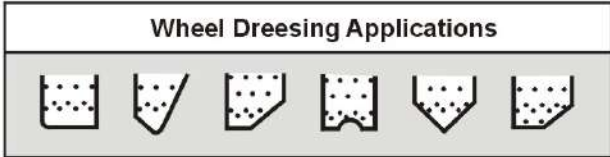
N.W. 3.8kg

Features :

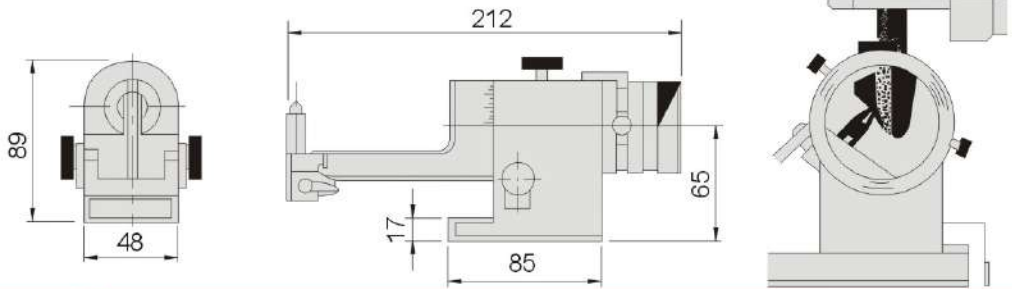
- ▶ KT50 is mainly applied on surface grinding machine and universal tool grinder.
- ▶ By “sighting” the diamond point through the lens, radius and angles can easily be made into various cross sections of flat or curved shapes.

Main parameters:

Center height 65mm
 Max. wheel dia. Ø205mm
 Max. Convex radius 0.2~10mm
 Max. Concave radius 0.2~25.4mm
 Dressing Angle 95°-0° -95°
 Tangential travel 22.5mm



Order No.	Model	Spec
52300-11	KT50	Inch
52300-12		Metric



52320

KT50S

Visual Radius and Angle Dresser



N.W. 3.5kg

Features :

- ▶ KT50S is mainly applied on surface grinding machine and universal tool grinder.
- ▶ By “sighting” the diamond point through the lens, radius and angles can easily be made into various cross sections of flat or curved shapes.

Main parameters:

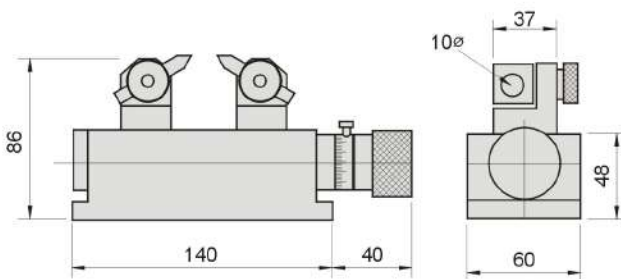
Center height 65mm
 Max. wheel dia. Ø205mm
 Max. Convex radius 10mm
 Max. Concave radius 25.4mm
 Dressing Angle 95°-0° -95°



52350 DF60 Precision Duplex Dresser



N.W. 3.2kg



Features :

- ▶ Specially designed for simultaneously dressing both sides of grinding wheel, achieving accurate performance and more efficient than conventional dressers .

Specifications:

Maxi width of wheel 40mm(1-9/16")
 Maxi dressing depth..... 40mm(1-9/16")
 Mini dressing width..... 0.2mm(0.0079")
 scale reading / DIV.....0.02mm(0.001")

Max.thickness	Min.thickness	Max.depth
40mm	0.2mm	40mm

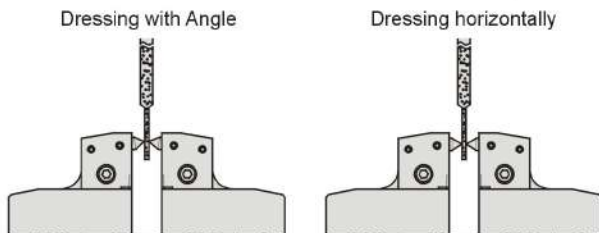
Order No.	Model	Spec
52350-11	DF60	Inch
52350-12		Metric

52360 DF50 Precision Duplex Dresser

PAT: 174305
 ZL 00 2 31135.6

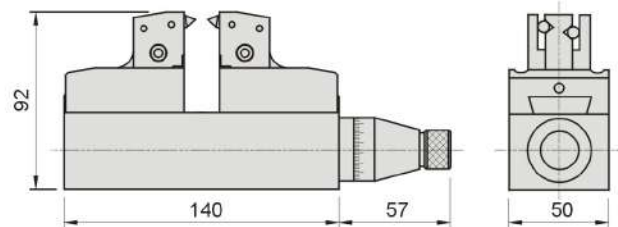


N.W. 3.4kg



Features :

- ▶ It adopts sealed construction and keep the dust out, with large surface of the guiderail, it stabilize and ensure accuracy.
- ▶ Diamond nibs can be adjusted parallel or with angle, and center aligned, scale reading 0.01mm on each division.
- ▶ Made of stainless steel.



Max.thickness	Min.thickness	Max.depth
20mm	0.2mm	40mm

Order No.	Model	Spec
52360-11	DF50	Inch
52360-12		Metric

WHEEL DRESSER

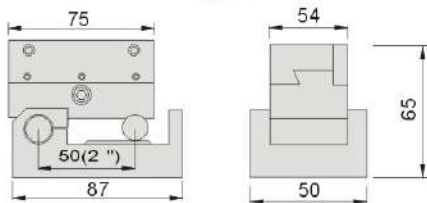
Wheel Dresser

52380 AP50H Angle Sine Dresser

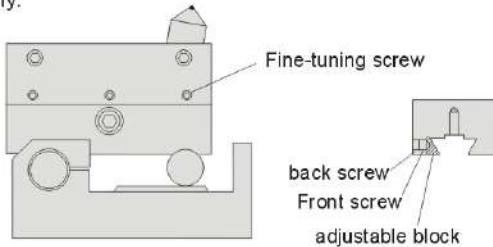


PAT: ZL 2007 2 0196026.3
M 333986

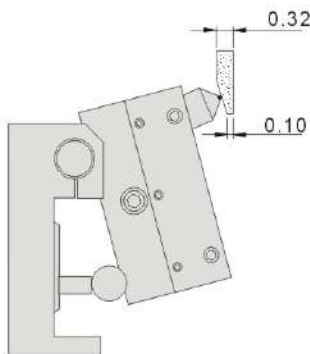
N.W. 1.4kg



AP50H has three screw holes for fine-tuning purpose, each holes contain two screws, one at the front, the other one at the rear. When adjusting rear screw pushing front screw forward and make the wedge moves, then move the slide until work smoothly.



Before applying AP50H, check the slide is tight or loose, if loose, simply light adjust fine-tuning screw until it smooth. This tool is high precision and capable of dressing any angles.

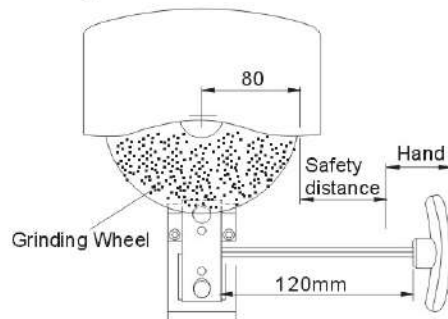


Features :

- ▶ AP50H provides gear driven and it is designed for better prevention and protection for the beginner.
- ▶ Double axis center accuracy is $\pm 0.002\text{mm}$
- ▶ It has the same function as model (52400 AP50D).
- ▶ It has stroke of 60mm.

Order No.	Model	Spec
52380-11	AP50H	Inch
52380-12		Metric

Applying gears driven to make forward/backward movement and installed with diamond pin on the slide. For safety purpose, hexagon wrench is applied with certain safety distance in order to support user to function AP50H and thus precisely dressing the demand angle.



AP50H has its own Patent and it basically the improved version of original type. Below is the comparison.

AP50H	AP50
<ol style="list-style-type: none"> 1. Applying gears driven 2. Safety distance when applying 3. Three fine-tuning screw at side 4. Easy to achieve precision dressing for any user 	<ol style="list-style-type: none"> 1. Applying manually 2. Close to wheel when applying 3. No fine-tuning function 4. Must have specialist to make precision dressing

52400 AP50 Angle Sine Dresser

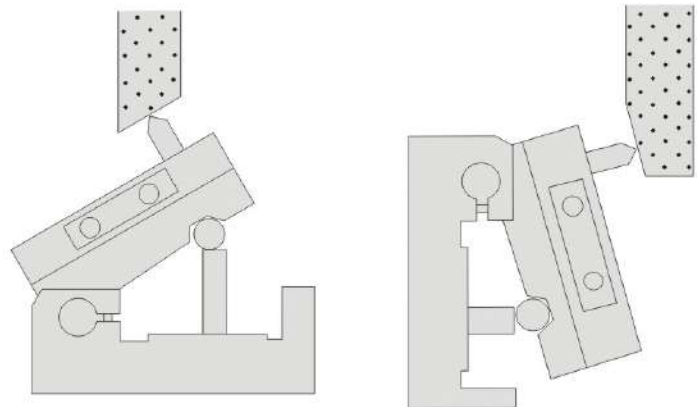
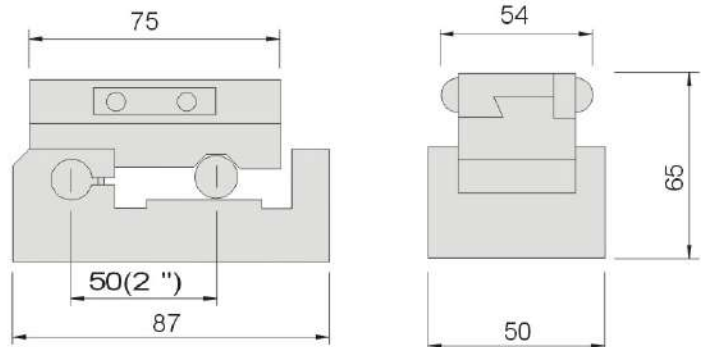
PAT: 191154
ZL 99 2 11094.7



N.W. 1.4kg

Features :

- ▶ AP50 has various Patents, regardless inconvenience of the conventional Angle Sine Dresser, release screws on both side and free to adjust any needed angle.
- ▶ Remove the slide block and it can be used as 50mm Sine Plate.
- ▶ Suitable for vertical or horizontal angles, sine angle 0-60° (horizontal), 45-90°(vertical) and both are within 0.005mm accuracy.
- ▶ Double axis accuracy is ±0.002mm.
- ▶ It has stroke of 65mm.



Order No.	Model	Spec
52400-11	AP50	Inch
52400-12		Metric

Wheel Dresser

52430

RD30

Precision Concave Convex Forming Dresser

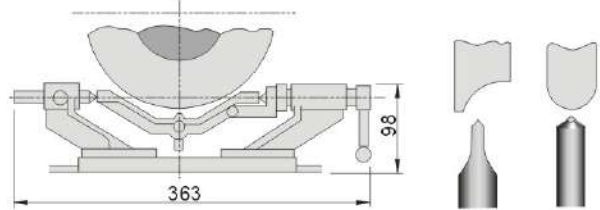
WHEEL DRESSER



N.W. 2.6kg

Features :

- ▶ RD30 is accurately controlled by handle, suitable for small convex/concave dressing, Convex R0.2~12mm, Concave R0.2~20mm.
- ▶ Suitable for applying wheel under $\varnothing 205\text{mm}$



52440

RD30A

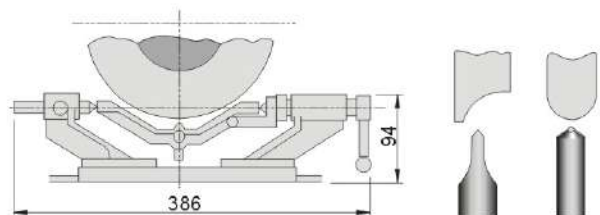
Precision Concave Convex Forming Dresser



N.W. 2.8kg

Features :

- ▶ RD30A is accurately controlled by handle, suitable for small convex/concave dressing, Convex R0.2~12mm, Concave R0.2~20mm.
- ▶ Suitable for applying wheel under $\varnothing 205\text{mm}$



52450

RD40

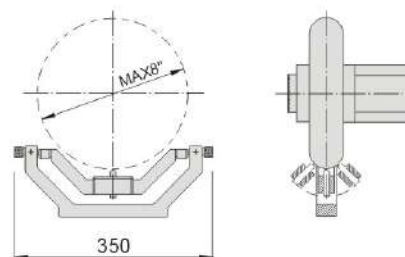
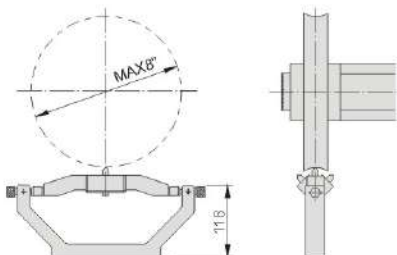
Concave Convex Forming Dresser



N.W. 6.2kg

Features :

- ▶ This medium type dresser is applied to surface grinders for convex and concave dressing.
- ▶ Suitable for wheels under 8" ($\varnothing 205\text{mm}$).
- ▶ Work range : Convex R0.5-40mm
- ▶ Concave R0.5-90mm
- ▶ Diamond pin is optional



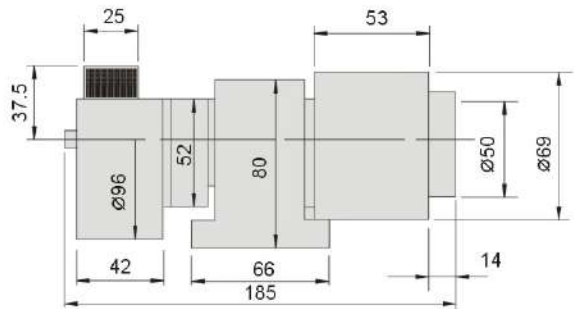
52500 DT100 Diamond Wheel Trimmer



N.W. 4.5kg

Features :

- ▶ DT100 is designed for dress peripheral wheels on machines with a vertical or horizontal spindle.
- ▶ The diamond wheel can be changed depending on the wheel that is going to be dressed. Especially, CBN or Diamond.



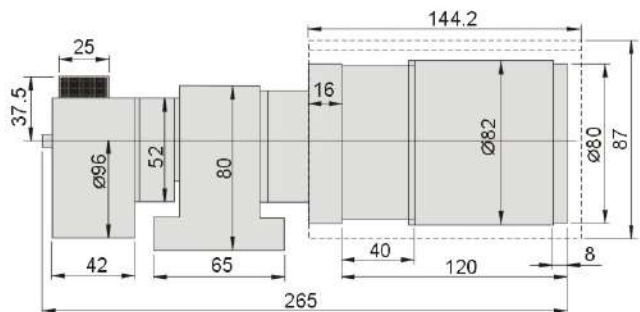
52550 DTM100 Motorised Diamond Wheel Trimmer



N.W. 6.0kg

Features :

- ▶ Motorised resin emery wheel can dress the diamond wheel flatness easily
- ▶ The diamond wheel can be changed depending on the wheel that is going to be dressed. Especially, CBN or Diamond.
- ▶ Roller driving motor 110V/60HZ 129rpm
- ▶ Roller driving motor 220V/50HZ 108rpm



Order No.	Model	Volts
52550-110	DTM100	AC110V 1Phase
52550-220		AC220V 1Phase

Grinding Machine Accessories

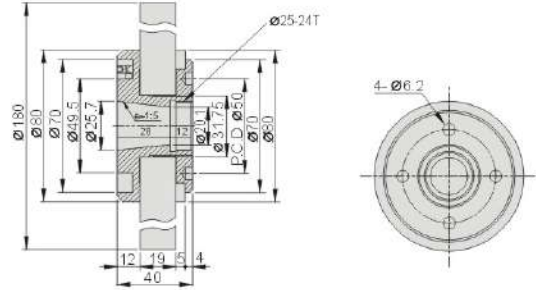
52554 F250 F250 Flange



N.W. 0.7kg

Features :

- F250 Flange is used in cylinder of KENT grinding machines.



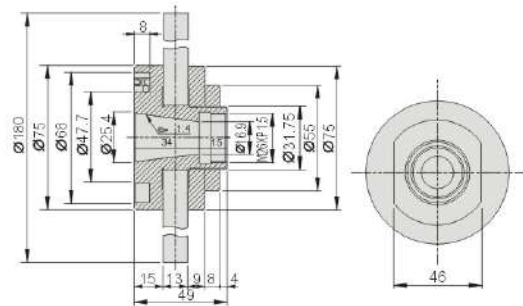
52556 F350 F350 Flange



N.W. 0.9kg

Features :

- F350 Flange is used in cylinder of TATUNG-OKUMA grinding machines.



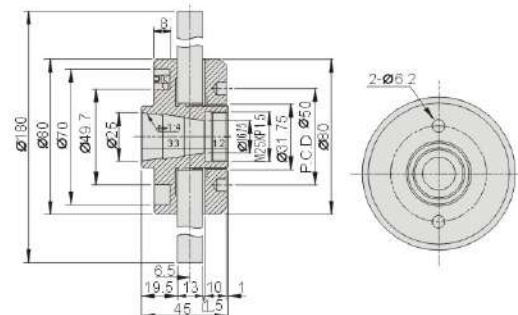
52558 F450 F450 Flange



N.W. 0.9kg

Features :

- F450 (USA) is used in cylinder of US standard grinding machines.



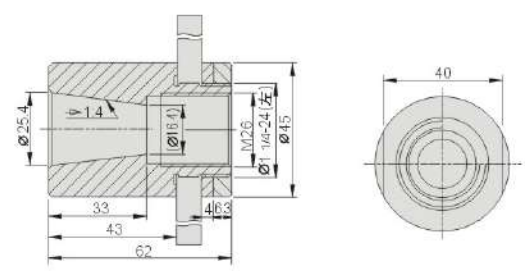
52560 F300 F300 Flange



N.W. 0.6kg

Features :

- ▶ F300 is applied to 614, 618 surface grinding machine.



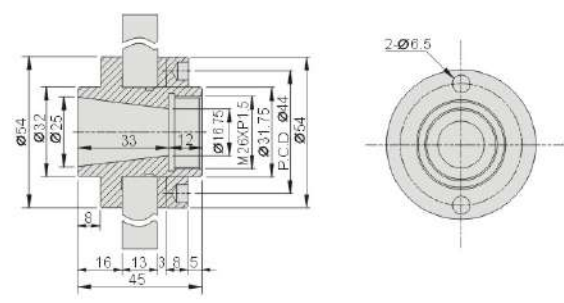
52562 F320 F320 Flange



N.W. 0.4kg

Features :

- ▶ F320 is used for cylinder of Tool Grinder.



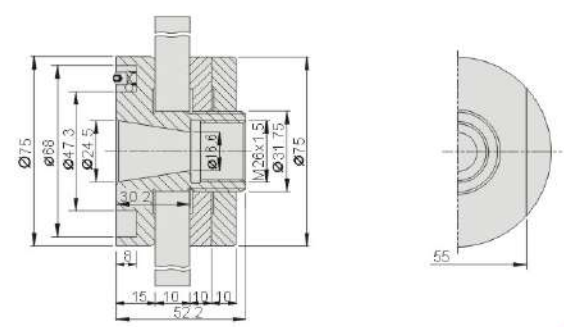
52564 F520 F520 Flange



N.W. 1.0kg

Features :

- ▶ F520 is used in OKAMOTO 52DX cylinder and control the tolerance within 0.003mm.



Grinding Machine Accessories

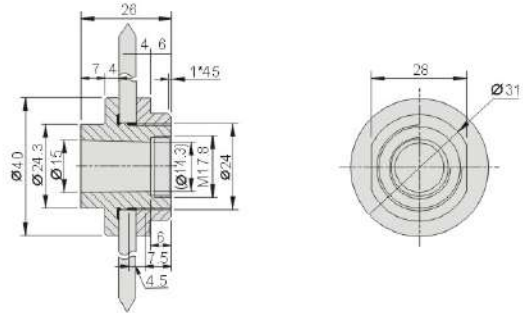
52566 W20 W20 Flange



N.W. 0.1kg

Features :

- W20 is used in WAIDA Optical Profile Grinder.



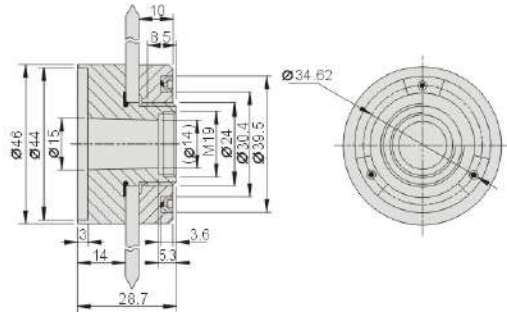
52568 W40 W40 Flange



N.W. 0.2kg

Features :

- W40 is used in WAIDA Optical Profile Grinder.



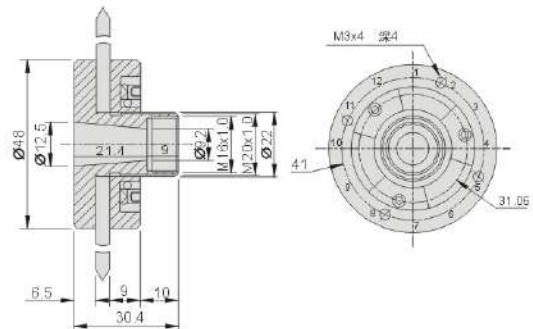
52570 P60 P60 Flange



N.W. 0.2kg

Features :

- P60 is used in Petewe Optical Profile Grinder.



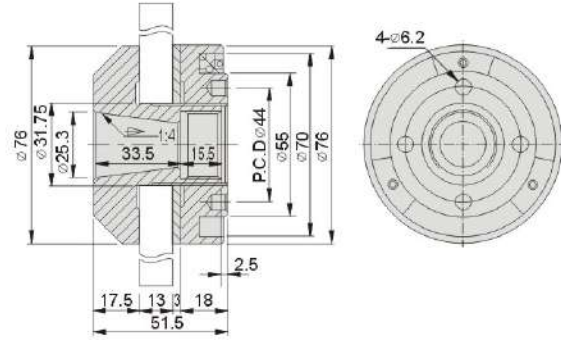
52572 FC110 FC110 Flange



N.W. 1.1kg

Features :

- ▶ Suitable for applying on WASINO Grinders.



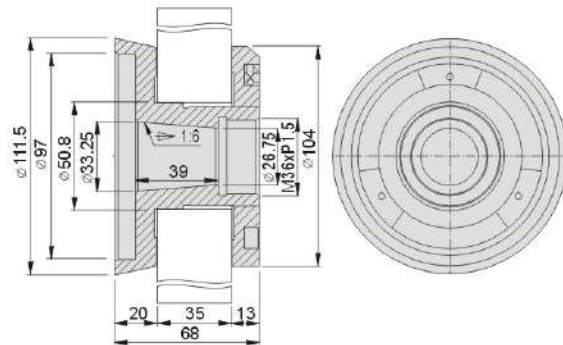
52574 FC520 FC520 Flange



N.W. 1.95kg

Features :

- ▶ Suitable for OKAMOTO ACC-52DX Grinders.



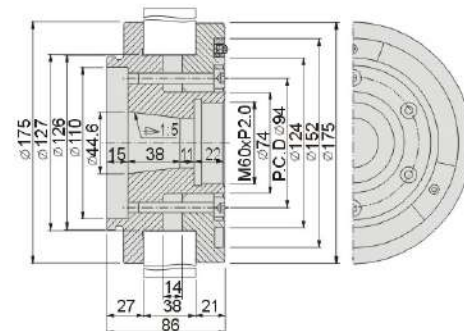
52576 FC630 FC630 Flange



N.W. 8.0kg

Features :

- ▶ Suitable for OKAMOTO ACC-63DX, TATUNG PSG-64 Grinders.



Grinding Machine Accessories

52578

FEB10

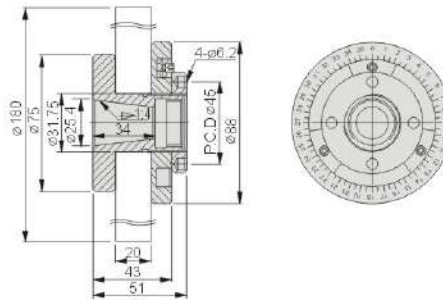
FEB10 Flange



N.W. 1kg

Features :

- ▶ Laser mark graduation reading on plates
- ▶ Suitable for TATUNG EN350 Grinders.



52580

FEB15

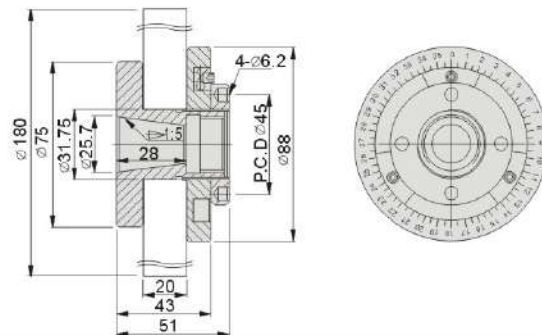
FEB15 Flange



N.W. 1kg

Features :

- ▶ Laser mark graduation reading on plates
- ▶ Suitable for KENT EN250 Grinders.



52582

FEB18

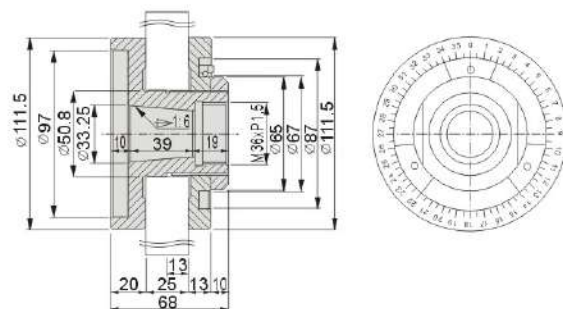
FEB18 Flange



N.W. 2.2kg

Features :

- ▶ Laser mark graduation reading on plates
- ▶ Suitable for OKAMOTO ACC-52DX Grinders.



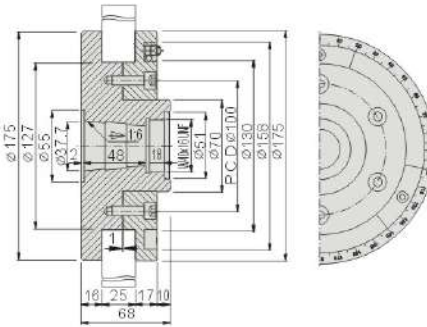
52584 FEB20 FEB20 Flange



N.W. 8kg

Features :

- ▶ Laser mark graduation reading on plates
- ▶ Suitable for KENT 410 Grinders.



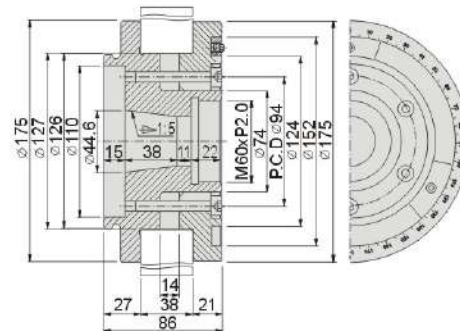
52586 FEB22 FEB22 Flange



N.W. 8kg

Features :

- ▶ Laser mark graduation reading on plates
- ▶ Suitable for OKAMOTO ACC-63DX, TATUNG PSG-64 Grinders.



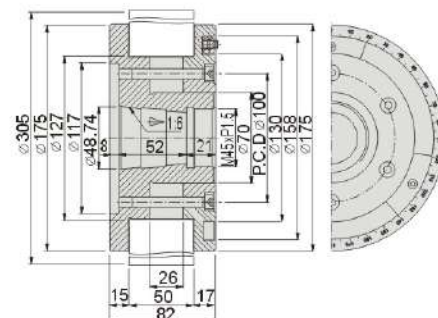
52588 FEB25 FEB25 Flange



N.W. 2.2kg

Features :

- ▶ Laser mark graduation reading on plates
- ▶ Suitable for KENT 515 3rd generation Grinders.



Punch Former

51250

PFD

ER Collet Punch Former



ER40

ER32

ER16

Features :

- ▶ With ER collets, the flexible range of collet is 1mm.
- ▶ Clamping under 4mm apply ER16 collet.
- ▶ PFD can rapidly clamp the workpiece and achieving higher stability during processing, no need to adjust the center accuracy.
- ▶ PFD-SE16 come with high precision SE16 collet it has accuracy within 0.005mm and flexible range clamping is 0.5mm

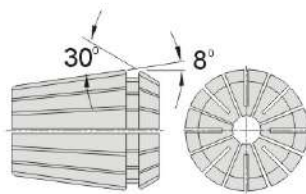
PFD-SE16



N.W. 5.6kg

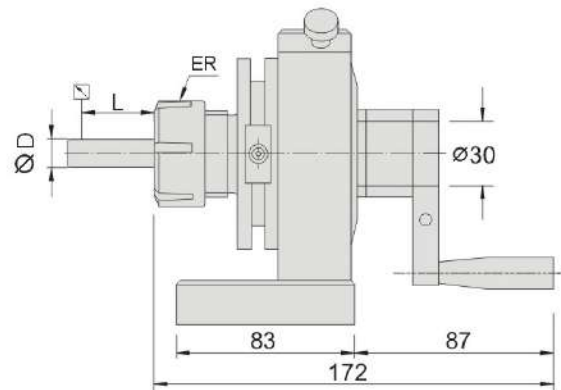
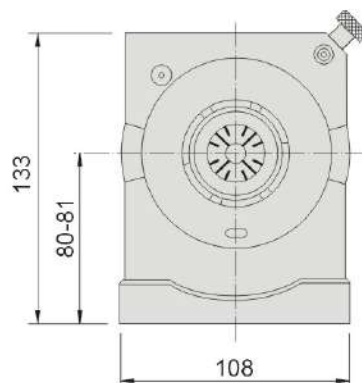


SE16



Collet Standard Accuracy

L	D	Accuracy
6	1.0-1.6	0.015
10	1.6-3.0	0.015
16	3.0-7.0	0.015
25	7.0-10.0	0.015
40	10.0-18.0	0.020
50	18.0-24.0	0.020
60	24.0-34.0	0.020



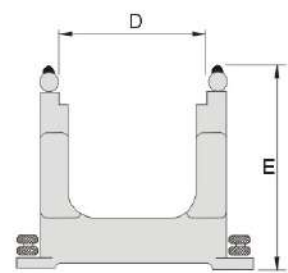
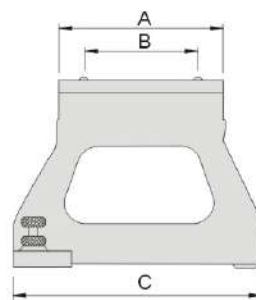
Order No.	Model	Collet Size	Collet Accuracy	N.W.
51250-16	PFD-ER16	2, 3, 4, 6, 8	0.010	5.6kg
51250-32	PFD-ER32	4, 8, 12, 16, 20	0.008	6.6kg
51250-40	PFD-ER40	6, 10, 16, 20, 25	0.008	7.6kg
51250-16A	PFD-SE16	2, 3, 4, 6, 8	0.005	5.6kg

52596 LBS08/14 >> **Level Balancing Stand**



Features :

- ▶ The machine includes a level which can be adjusted by three screws on the machine.
- ▶ Upper round rod and the slide surface had taken heat treatment, hardness 56°-58°.
- ▶ Max. applicable dia. of wheel: LBS08 --- Ø205mm
LBS14 --- Ø355mm



Unit:mm

Order No.	Model	Max. Applicable Dia	A	B	C	D	E	N.W.
52596-08	LBS08	205	155	130	226	115	185	4kg
52596-14	LBS14	355	180	160	260	125	235	4.6kg

52598 WBS300 >> **Wheel Balancing Stand**

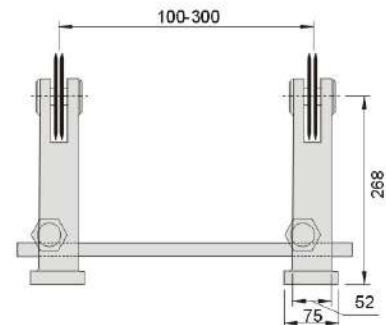
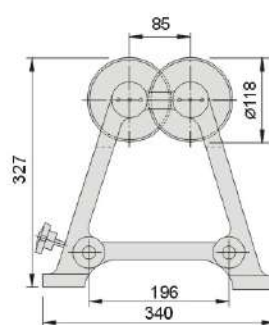


N.W. 14kg

**Custom made for Max. Ø800mm is available on request

Features :

- ▶ Better cost effectiveness and extend grinding wheel life.
- ▶ Portable and adjustable with friendly operation.
- ▶ Adopting super-sensitive bearings.
- ▶ Made of aluminum alloy with lightweight design.
- ▶ 4 precisely ground and polished revolving discs hardened HRC56°~58°
- ▶ Max. range of the two side-rollers is 300mm.
- ▶ Max. applicable dia. of wheel:Ø508mm.



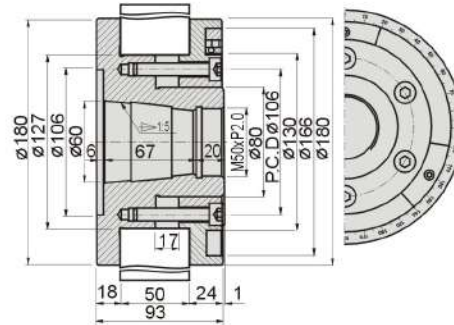
Grinding Machine Accessories

52590 FEB30 FEB30 Flange



Features :

- ▶ Laser mark graduation reading on plates
- ▶ Suitable for CHEVALIER 0701 Grinders.

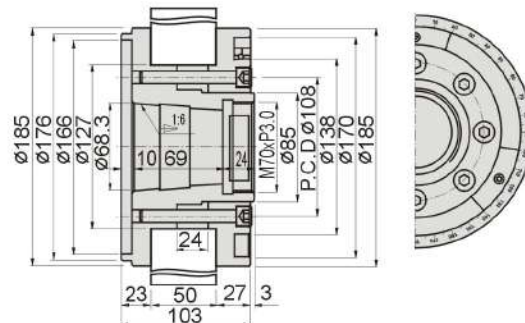


52592 FEB35 FEB35 Flange



Features :

- ▶ Laser mark graduation reading on plates
- ▶ Suitable for KENT 816 Grinders.



52594 FEB40 FEB40 Flange



Features :

- ▶ Laser mark graduation reading on plates
- ▶ Suitable for large OKAMOTO Grinders.

