

Read the user's manual when you use the press machine.
The information in this leaflet is subject to change without notice.
The photograph on this leaflet can be different from actual machine.

KOMATSU

Komatsu Industries Corp.

1-1 Ono machi Shinmachi Kanazawa shi Ishikawa 920-0225, Japan
<http://www.komatsusanki.co.jp/en/>
Marketing&Service Division Marketing Department
TEL:+81-76-293-4209 FAX: +81-76-293-4354

SLK13-003

H1F-2

KOMATSU
AC SERVO
PRESSES

Komatsu Industries Corp.



Free motion for your Future

New H1F-2 Improves Your Manufacture,
Changes Your Future

New H1F-2 Debut

Free motion

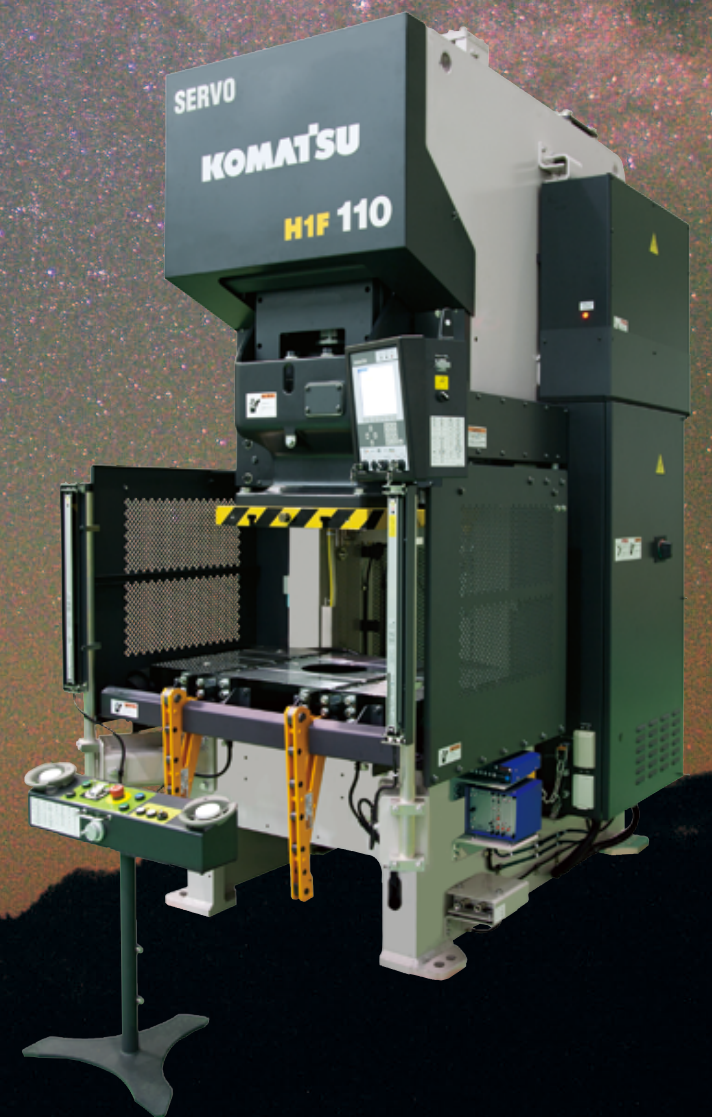
Free motion to
optimize flexibility,
precision and speed

Function

Function to bring out
the best of free
motion

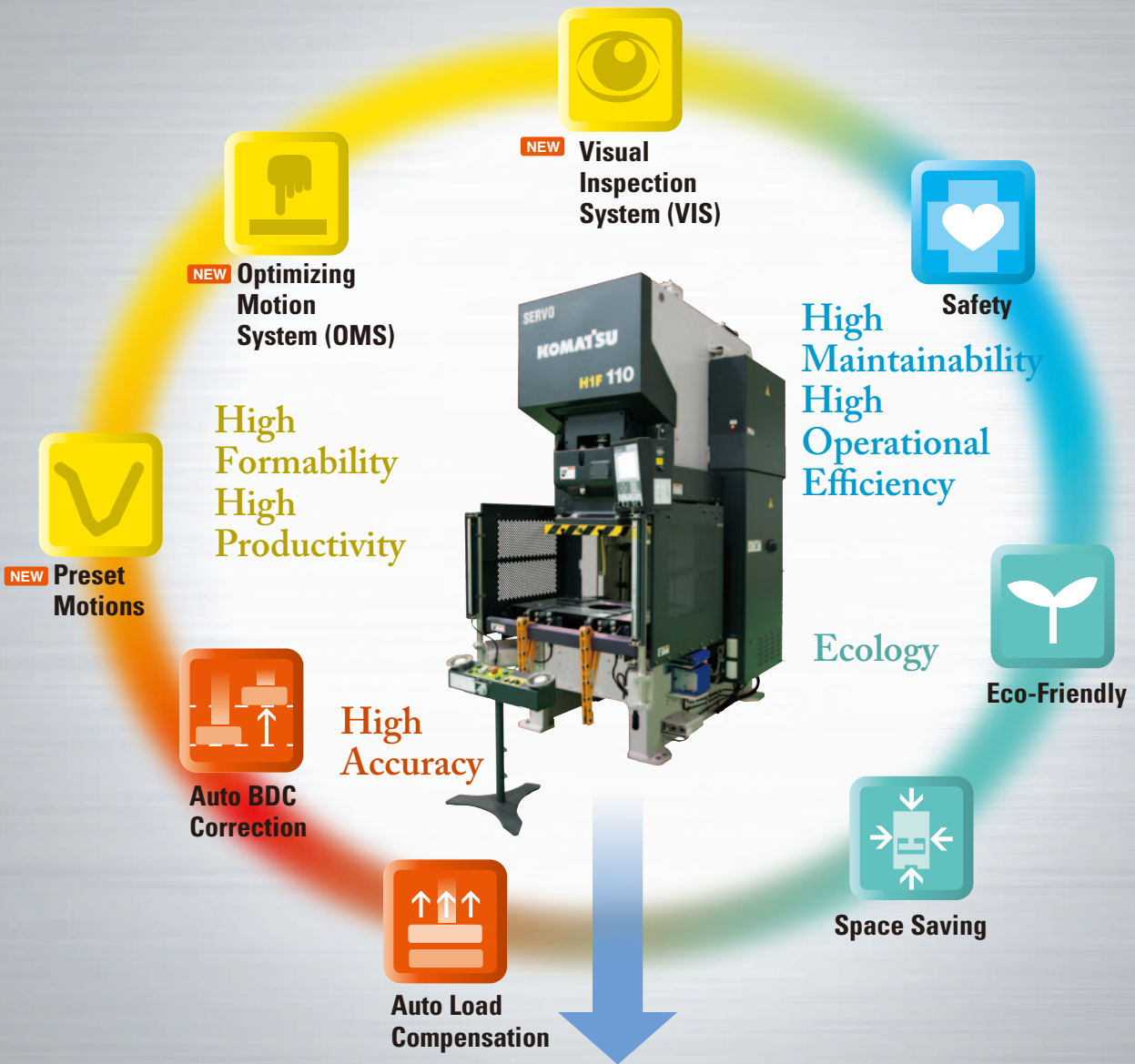
Future

Future to be achieved
by eco-friendly H1F-2

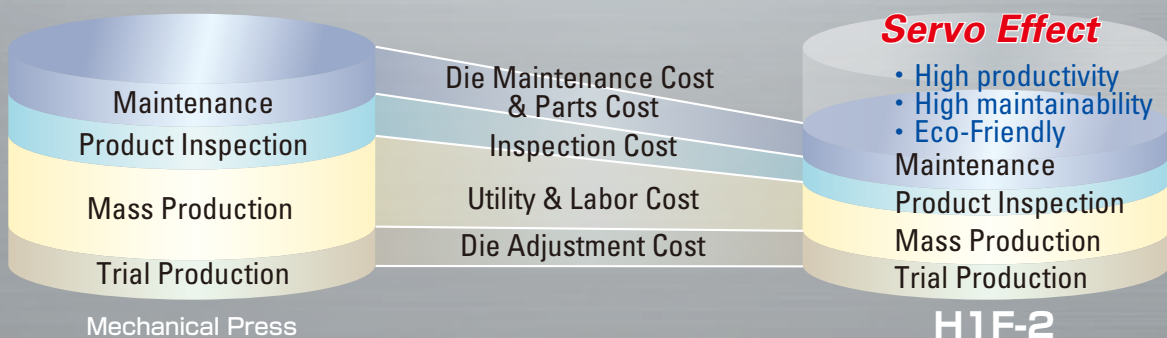


Evolving Servo Press

Optimizing Servo Effects for Press Working



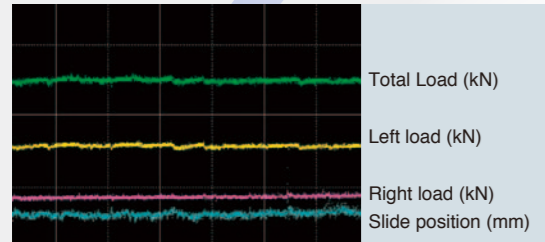
Cut Your Operation Cost



Features

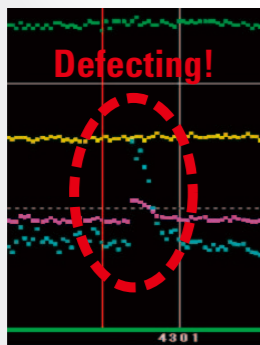
Visual Inspection System (VIS)

VIS shows data monitored by linear scale and load monitor on SIT4 control monitor. You can check forming at sight on SIT4 monitor, without PC.



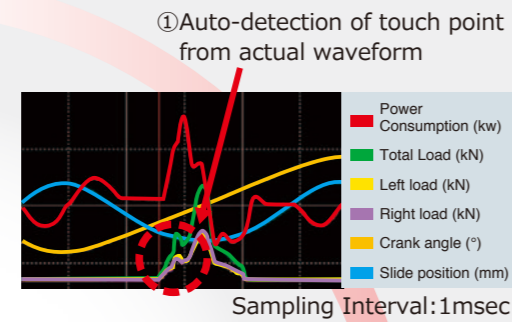
Trend Function

VIS measures and shows actual working load (total/left and right) and slide position of every *500 strokes. *Set measurement interval depending on your need.



Sampling Function

OMS measures and shows slide position and load every stroke.



DATA SET	DIE No.	REV.	NAME	L-LIM	OFFS	OFF
1	100	0	SAMPLE A	302.33mm	10μ	10μ
2	100	0	SAMPLE A	302.33mm	10μ	10μ
3	100	0	SAMPLE A	302.33mm	10μ	10μ

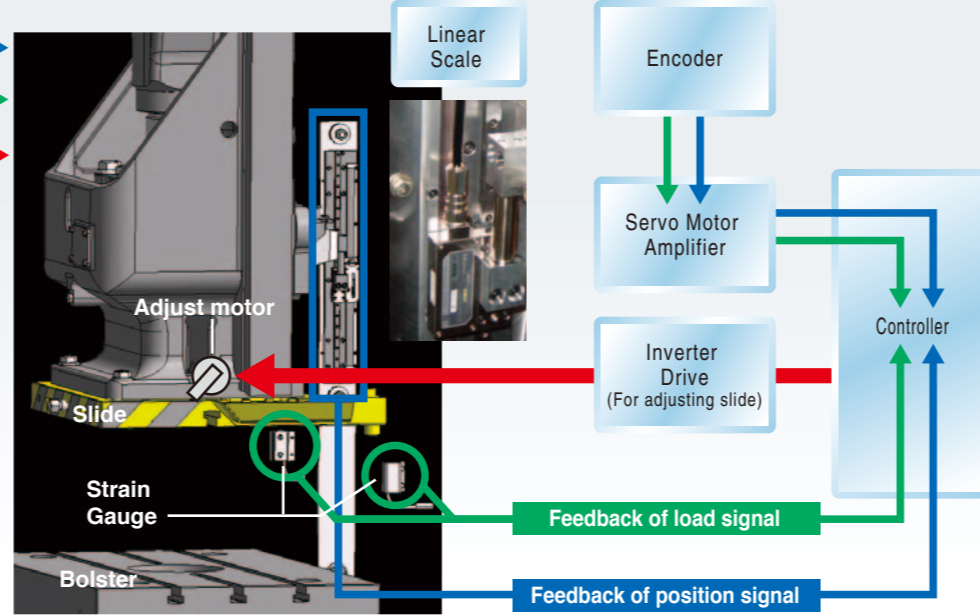
Optimizing Motion System (OMS)

Push "touch position read button", auto-input crank angle and slide position.



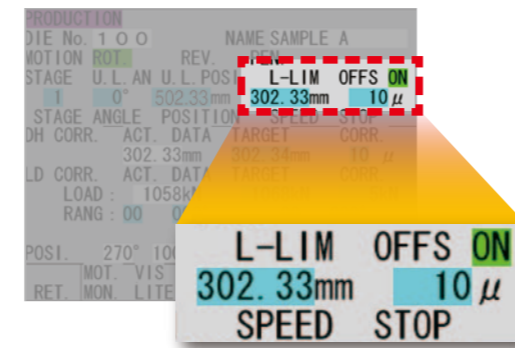
Assist Function for Production

- Auto BDC Correction
- Auto Load Compensation
- Feed Back Control

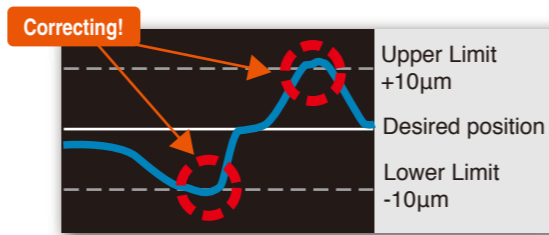


Auto BDC Correction

Auto BDC Correction measures slide position of each shot with linear scale to keep high accuracy of BDC for long production.



Setting Lower Limit Correction Range

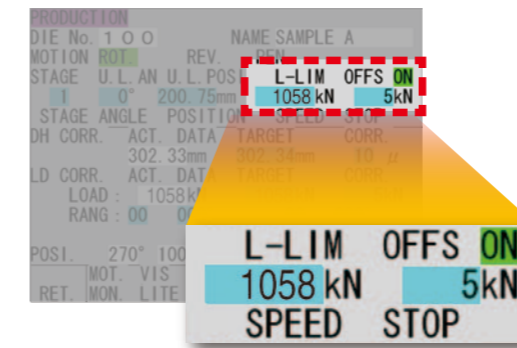


Maintain BDC position accuracy within **10μm** in either direction from desired position.

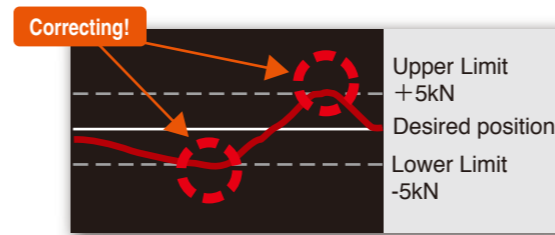


Auto Load Compensation

Auto Load Compensation stabilizes working pressure and enables stable and high accuracy forming even for long operation.



Setting Lower Limit Compensation Range

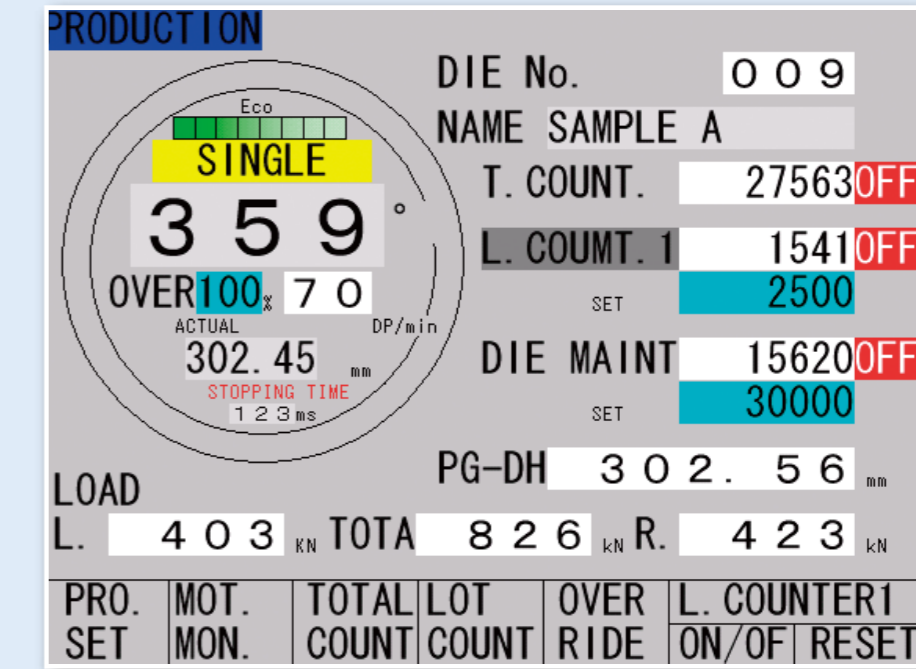


Maintain load variance no more than **5kN** in either direction from desired amount.

SIT4 Controller

8.4inch TFT LCD monitor is equipped to operate H1F-2 safety, surely and smoothly. 3-language display also helps your global product activity.

8.4 Inch TFT LCD Monitor Achieved High Visibility

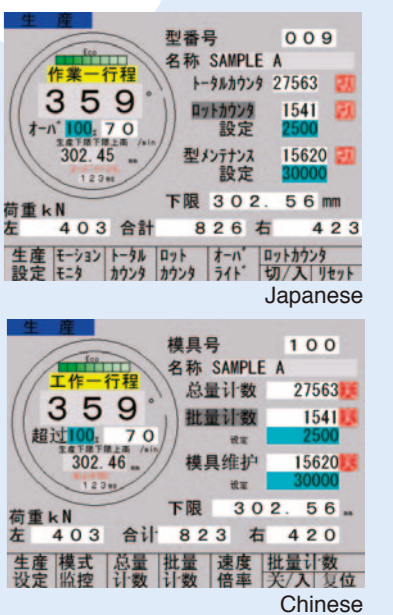


Monitor Display



SIT4 Controller

Triple Language Display



Preset Motions

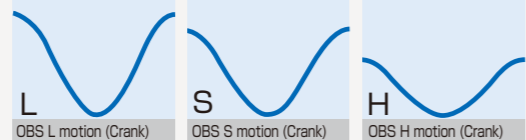
Slide motions of Komatsu mechanical press(OBS) and Komatsu servo press(H1F-11) are installed. Users who are familiar with them can operate H1F-2 as before.

Various motions best suit for various process are also installed

SEARCH	NAME	MEMO
001	OBS110-L	
002	OBS110-S	
003	OBS110-H	
004	H1F110-11-S	
005	H1F110-11-H	
006	LINK	
007	ROBOT	
008	TRANSFER	
009	PROG. ROT.	
010	PROG. PEN.	

Preset Motions of H1F-2

OBS (motions of mechanical press)



H1F-11 (motions of servo press)



Effect

Quest for optimum motion
Quest for shortest setup time

Servo Effect

Improved Productivity Improved Accuracy
Improved Formability
Improved Die Maintenance

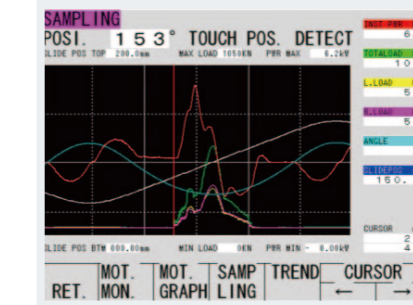
Effect

Stabled accuracy of dimension
Adjust die height automatically

Servo Effect

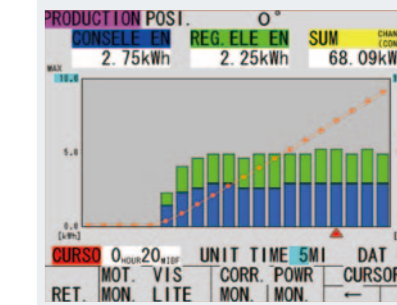
Improved Productivity Improved Accuracy
Improved Formability
Improved Die Maintenance

VIS Monitor Display



- Visual Inspection System (VIS)
- Optimizing Motion System (OMS)

Power Monitor Display



Power Monitor

Motion Setting Display

DATA SET	DIE No.	REV.	NAME	L-LIM	OFFS	OFF
1	100	0	SAMPLE A	302.33mm	10μ	10μ
2	100	0	SAMPLE A	302.33mm	10μ	10μ

Free Motion

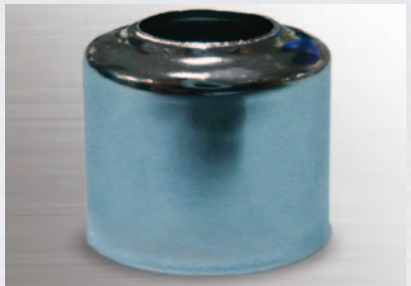
Auto BDC Correction Display

PRODUCTION	DIE No.	REV.	NAME	L-LIM	OFFS	OFF
1	100	0	SAMPLE A	302.33mm	10μ	10μ
2	100	0	SAMPLE A	302.33mm	10μ	10μ

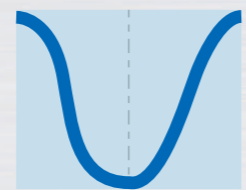
- Auto BDC Correction
- Auto Load Compensation

Case Examples

▶ Drawing of SUS or Processing resistant material



Fewer Shock Marks & Cracking,
Higher Formability

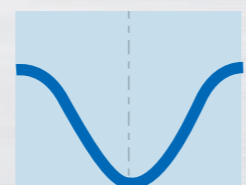


Link Motion (Rotation)

▶ Minor Diameter Piercing

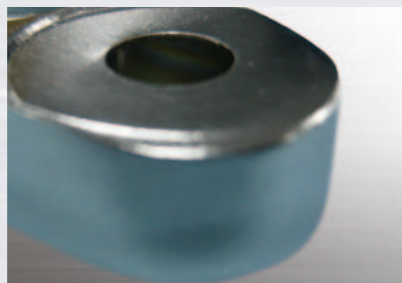
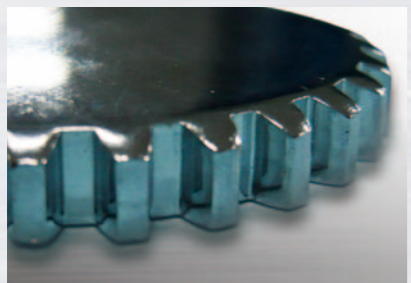


Less Vibration, Longer Die Life and
Higher Productivity

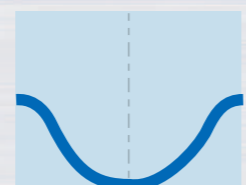


Crank Motion (Pendulum)

▶ Precision Blanking for a Gear or a Profile

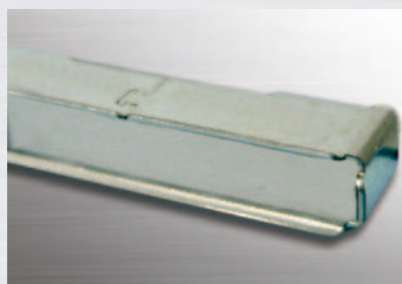
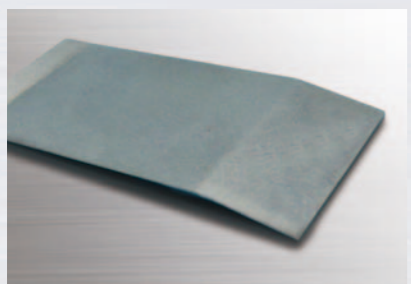


Less Processing Heat,
Longer Die Life and Higher Productivity

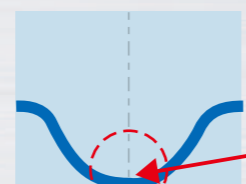


Link Motion (Pendulum)

▶ Precision Bending



Higher precision of BDC,
Higher Accuracy of Products

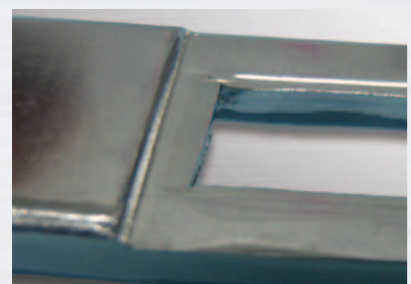


Link Motion (Pendulum)

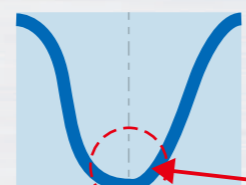
Auto BDC
Correction

Accuracy of Correction is
 $\pm 10\mu\text{m}$

▶ Sheet Forging and High Load Forming



Less Processing Heat,
Higher Accuracy of Products



Link Motion (Rotation)

Auto Load
Compensation

Stabilize Forming Load



Safety

The Highest Level of Safety of The World

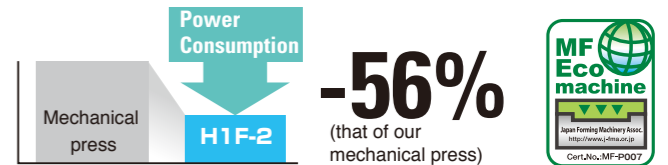
H1F-2 Complies with revised Japanese Standard Power Presses



Eco

Power
Consumption

Top level of energy
saving (MF Eco machine)



Voltage
Capacity

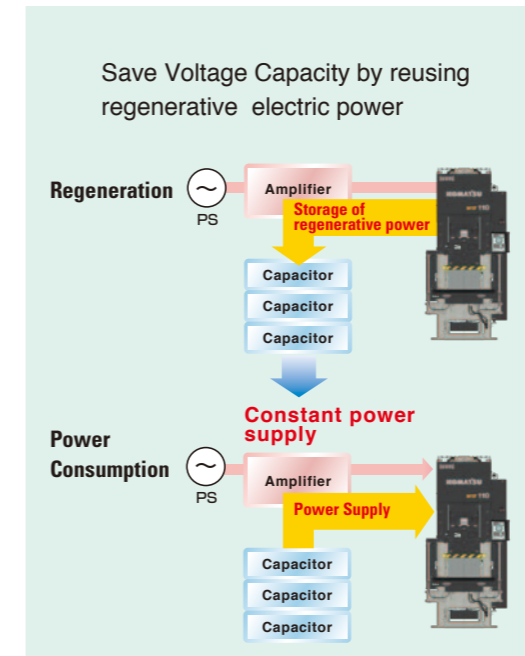
Equivalent for Komatsu Mechanical Press in Single/Transfer & Robot Process

Easy replacement from Komatsu Mechanical Press
without any capacity expansion works.

NEW

Low/Peak Power Current Suppressive Capacitor (Option)

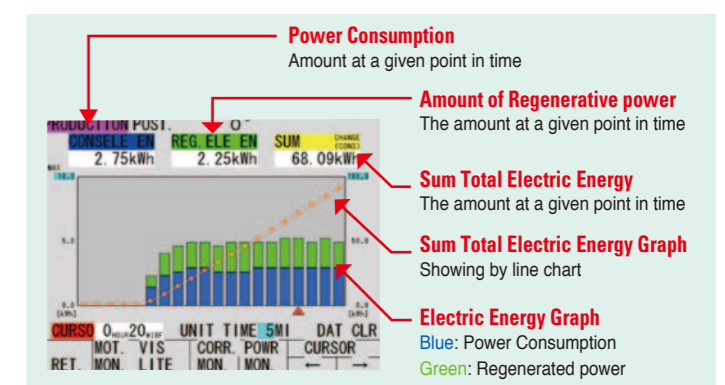
The electric source for the mechanical press
Is applicable for H1F-2 by using the capacitor



NEW

Power Monitor

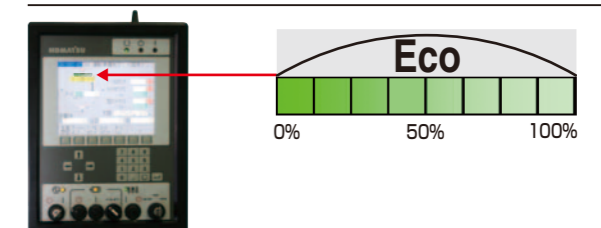
Showing energy consumption per
unit time/ accumulated graphically



NEW

Eco Monitor

Eco Monitor, added on the press controller,
shows the rate of regenerated power to
power consumption.

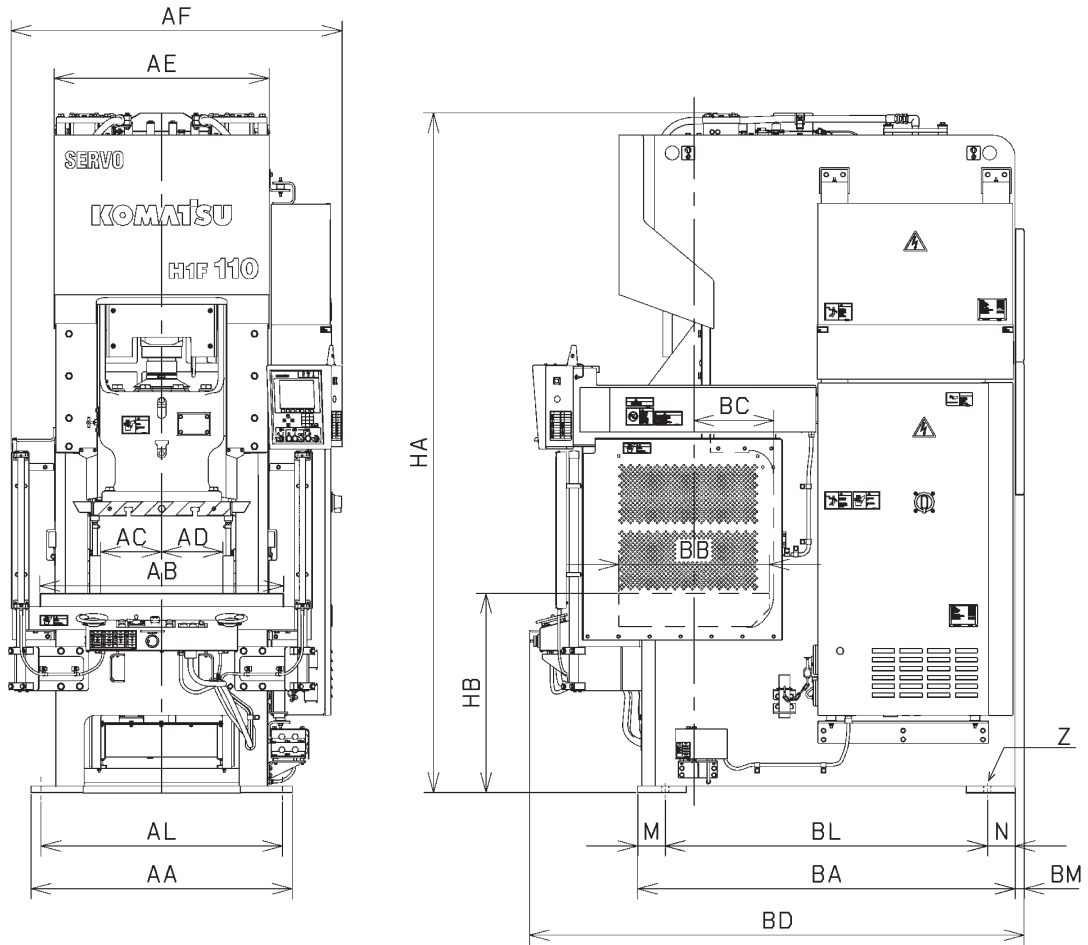


Saving Space

H1F-2 is smaller than
conventional H1F



■ Out line H1F110



Main Specs

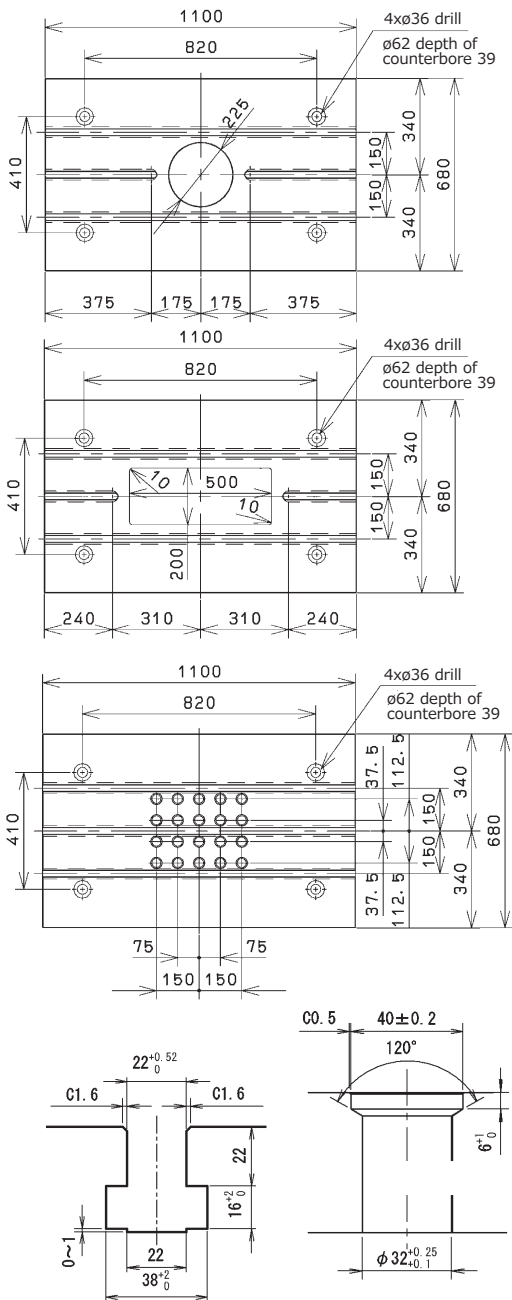
Model			H1F110-2
Frame Structure			C-Frame
Capacity	kN		1100
Capacity Limit	mm		5.0
Slide Stroke	mm		200
Max SPM	min ⁻¹		70
Pendulum Slide Stroke	mm		30~150
SPM(Pendulum)	min ⁻¹		~138
Die Height	mm		350(Standard)/380(Long)
Slide Adjustment	mm		100
Slide	L-R	mm	620
	F-B	mm	530
Bolster	L-R	mm	1100
	F-B	mm	680
	Thickness	mm	150
Allowable Upper Die Weight		kg	350
Main Servo Motor		kW	30
Required Air Pressure		MPa	0.49
Temperature		°C	5~40

General Dimensions

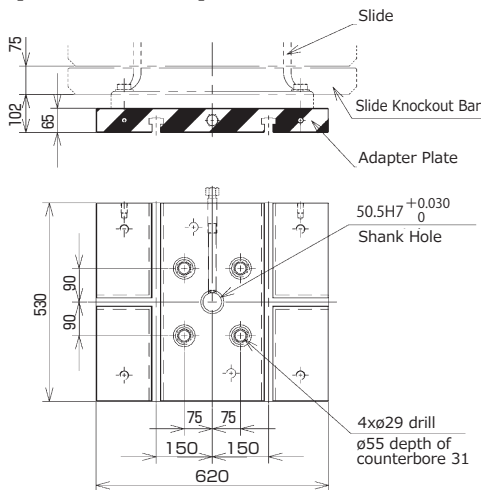
Model		H1F110-2
Width	AA	1180
	AB	1100
	AC	276
	AD	276
	AE	971
	AF	1501
Height	AL	1090
	HA	3070
Depth	HB	900(870*1)
	BA	1705
	BB	680
	BC	360
	BD	2241
	BL	1455
	BM	51.5
Other	M	125
	N	125
	Z	Φ32

※¹ When selecting Long Die Height 380mm
The information above is subject to change without notice

[Standard Bolster]



[Standard Slide]



Standard Equipment

- Auto BDC Correction
- Auto Load Compensation
- Reverse Motion
- Angle Sensor Switch (contact output) 8 channels available
- Lot/Total/ Die maintenance Counter
- Additional Terminal for QDC
- Load Monitor
- Manual Pulse Hand Wheel (with Normal/Reverse Rotation Mode)
- Free Motion
- Visual Inspection System (VIS)
- Optimizing Motion System (OMS)
- Power Monitor
- 3-Language Display (Japanese/English/Chinese)
- Name Plate
- Manual Air Tank

Safety

- Compliant to Revised Japanese Standards for Press
- Light Guard
- Rear Guard
- Front Guard
- Safety Block (with safety plug)
- Earth Leakage Circuit Breaker

Equipment ● Fixed ○ Standard ○ Alternative - No Setting

Item	Single	Single/Progressive	Progressive	Transfer/Robot		
Menu	SUP3	SSP3	SDP3	SAP3		
Standard Items by menu	Additional Software for Coil Line Interface	—	●	●	—	
	Additional Software for Robot Interface	—	—	—	●	
	Continuous Operation Mode	—	●	●	●	
	Terminal for Misfeed Detector	—	●	●	●	
	Mechanical Slide Knockout Device	●	●	—	—	
	Air Ejector	1 unit ●	●	—	●	
	3 units —	—	●	—		
Pendulum Stroke Motion	—	●	●	—		
Selection	Die Height	350mm ○	○	○	○	
		380mm ○	○	○	○	
	Tow-Hand Control Button *Separately* unavailable with QDC	Fixed Type	○	○	○	○
		Separate Type	○	○	○	○
	Low/Peak Power Current Suppressive Capacitor	No Select	●	○	○	●
		Select	—	○	○	—
	Paint Color	Komatsu Standard	○	○	○	○
		User's Original	○	○	○	○
	Slide	Komatsu Standard	○	○	○	○
		User's Original	○	○	○	○
	Bolster	Standard Round Hole	○	○	○	○
		Standard Square Hole	○	○	○	○
		Standard Pin Hole	○	○	○	○
		User's Original	○	○	○	○
	QDC (Clamps, Die Lifter, Draw Out Rails)	No Select	○	○	○	○
Select		○	○	○	○	
Anti-Vibration Device *Including Tip-Resistance Equipment	Cushion Mount	○	○	○	○	
	Cushion Mav.	○	○	○	○	
	Anchor Bolt	○	○	○	○	
Right/Left Side Guard	Select	●	●	○	○	
	No Select *2	—	—	○	○	

*2For supplying without side guards, the machine user is required to read "Slide Risk Check Map" and understand the risks and the necessity for safety measure, since we have to ask the user to take necessary countermeasure for preventing a part of body entering the die area of the press from both side of the slide.

Komatsu Industries Corp.

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<http://www.komatsusanki.co.jp/en/>
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