**PRODUCT CATALOG** 



# HYDRAULIC IRONWORKERS & PUNCHING MACHINES



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SUNRISE

# INTRODUCTION

With a highly dedicated team, Sunrise Fluid Power Inc. has been specializing in the manufacturing of hydraulic ironworkers, punching machines, bending machines, and other hydraulic machinery and equipment for more than 30 years. Total customer satisfaction is our number one goal. We are passionate about providing engineering excellence in everything we do, and we are dedicated to manufacturing world-class, high-value products for our global customers.

# **Product Differentiation**

Sunrise is ISO-9001 certified by BVQI, and our products meet the CE safety requirements and regulations. We relentlessly seek continuous improvement and product development. Currently Sunrise has the broadest range of ironworker and punching machine models compared to any other manufacturer. Sunrise product advantages: Durability, Accuracy, and Versatility. Besides our very popular single and dual operator models, we have introduced the K-series, a new line of ironworker with vertical movement at all stations. The center beam in the entire range of K-series moves in straight up and down motion to provide less deformation, better results and longer tooling life.

# **Quality Control**

Quality of the highest standard is the key factor in success. All key components of our ironworkers, punching machines, etc. are made in-house at our modern plant and automated production lines. We use the latest control system to ensure highly efficient production, and the quality assurance team measures and tests each component to ensure precision standards of machined parts are met or surpassed. Finally, before shipping, each complete machine goes through intensive quality and performance tests to make absolute sure it meets our strict company quality standards before it arrives at the customer's operation.

# **Sales and Service**

Our global sales network covers almost 50 countries in Europe, Australia, North America, Southeast Asia, the Middle East and more. This coverage, combined with the quality of our machines, makes Sunrise one of the best choices when it comes to metal forming. In this highly competitive international market, Sunrise's market share continues to grow. Thank you to our many and growing list of satisfied customers for your continued support. Sunrise is now one of the leading brands in the fabricating industry. We look forward to your continued support and comments -together we will push quality at Sunrise ever higher.

Sunrise Hydraulic Ironworkers are designed with multiple functions to save labor, time, energy and cost. This allows Sunrise Ironworkers to meet the diversified needs of the metal fabricating industry. Maximum efficiency and long life is guaranteed by using the latest manufacturing methods, including powerful CAD design, modern production line with CNC equipment and continuous quality control. Each work station is equipped with specially designed hold-downs to ensure safety while providing precision and ease of use. These ironworkers are the most economical and efficient machines in the industry for the manufacturing of metal products.

All Sunrise ironworkers and punching machines come standard with a low pressure tool alignment mode. The operator can use the JOG mode to run the machine in low pressure and low speed for tool alignment, blade changes and maintenance operations. This greatly improves operator safety and prevents tool damage in case of mis-alignment.

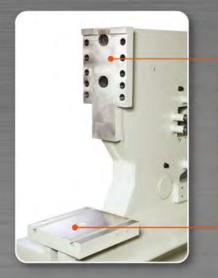
#### Key features on the dual cylinder models:

The dual cylinder models feature a separate cylinder for independent operation from shearing stations.

Cylinder ram with flat surface for rigid guiding and to ensure proper alignment of tool.

Keved punch ram to ensure alignment of shaped tooling.





The punching station features a large cylinder mounting plate to ensure maximum . cylinder support under heavy load. The punching base is one solid plate with T-slot grooves for universal tool fixture.

The cylinder ram is guided at three positions to provide extra support and absorb side-load forces for added protection of cylinder seals.

The base of the machine is made from welded channel in a grid pattern for a rigid machine foundation

The frame of the machine is a monoblock construction that integrates both bolts and welding reinforcement to provide maximum frame structure rigidity



ensure excellent reliability of

DC control circuit provides full

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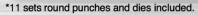
# WORK **STATIONS**

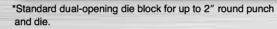
### **Punching Station**

- A full range of punches and dies are available for various punching needs. • Quick change retaining nut system for fast punch tooling change.
- Thoughtfully designed stripper for visibility, safety and ease of use.
- A large 2-piece table with scales and gauging stops is standard on all models.
- Stripper with interchangeable plates of various openings to minimize deformation is standard on all models.
- Optional hydraulic stripper is available on dual-cylinder ironworkers and all punching machines.











Overhang die holder for punching channel flanges and angles. (optional on single cylinder models)



\*Urethane spring stripper for minimal deformation. Safety cover removed for showing.

\* : Optional tooling



flanges and webs.

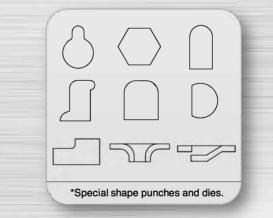


\*Flip-stop gauge table. 1-3M lengths. (S/SD/KD and PM models only)



\*Single vee press brake.

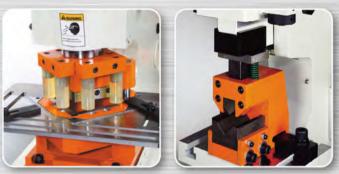
\*Multi vee press brake.



\*Optional Semi-Automatic CNC Tables with 40" x 16" travel.







\*Large vee-notcher. (Punch side)

\*Angle bending press.



# **WORK STATIONS**

### **Flat Bar Shearing Station**

- Specially machined upper blade to give a clean shear with minimum distortion.
- Lower blade has four usable cutting edges.
- Variable degree miter-cutting on angle flange.
- Easily adjustable hold-down.
- Support table with guides for accurate positioning.







\*Optional hydraulic hold-down for double cylinder ironworkers. (Standard on IW-185SD)

# **Bar Shearing Station**

- One hold-down for various sizes of square bar shearing and round bar shearing.
- Optional channel and section bar shear tooling is available for most models. (See specification chart for details)







\*Channel blades. (optional)

### **Angle Shearing Station**

- Single shear with no material loss and minimal deformation.
- 45° miter-cut is easy and clean.
- Stationary blades with four usable cutting edges.
- · Selectable corner radii on moving blades for optimum results on small or large angles.



### **Notching Station**

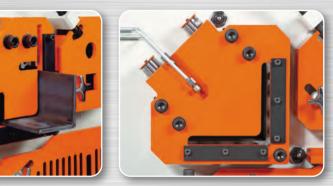
- Ideal for notching of flat bars and angles.
- Electrically interlocked safety guard for maximum safety and visibility.
- Gauging table included with stops for precise positioning.



# **Other Included Features**

- 1. Three limit switches enable setting of short notch stroke to improve efficiency. (on S/SD models)
- 2. Magnetic base LED work light for safer operation. (optional on IW-50M)
- 3.40" electric backgauge for higher efficiency in repetitious work. The gauge extension is available depending on request.





\*Optional hydraulic hold-down for angle shear.

\*Optional.

\*Optional on IW-50M.



# **K - SERIES IRONWORKERS**

The K-series are special designed compact ironworkers with vertical movements at all stations. The entire main slide moves in straight up and down motion to provide the optimum results for punching, shearing, notching, and bending. Hydraulic hold-down and urethane spring stripper are also available for the best performance. The fast cylinder stroke greatly improves the efficiency. This model incorporates versatility, efficiency, accuracy, and ease of use at an excellent price.



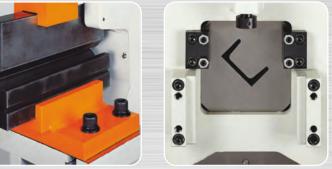
(optional on IW-50K)





\*Urethane spring stripper. \*Mu Safety cover removed for showing.





\*Multi vee press brake.

\*Channel Shear.



#### IW-95KD

# **K - SERIES IRONWORKERS**

#### **Capacities and Specifications**

Capacities and Speci				Unit: Inci	
MODEL	IW-50K	IW-66K	IW-66KB	IW-95KD	
PUNCHING					
Punching Pressure	50 Ton	66 Ton	66 Ton	95 Ton	
Punch Capacity	ø <sup>3</sup> / <sub>4</sub> x <sup>5</sup> / <sub>8</sub>	ø <sup>7</sup> / <sub>8</sub> x <sup>3</sup> / <sub>4</sub>	ø <sup>7</sup> / <sub>8</sub> x <sup>3</sup> / <sub>4</sub>	ø1 x <sup>7</sup> / <sub>8</sub>	
(Diameter x Thickness)	ø1 <sup>1</sup> / <sub>2</sub> x <sup>5</sup> / <sub>16</sub>	ø1 <sup>1</sup> / <sub>2</sub> x <sup>7</sup> / <sub>16</sub>	ø1 <sup>1</sup> / <sub>2</sub> x <sup>7</sup> / <sub>16</sub>	ø2 x <sup>1</sup> / <sub>2</sub>	
Throat Depth	6 <sup>1</sup> / <sub>2</sub>	7 <sup>7</sup> /8	7 <sup>7</sup> /8	16 <sup>1</sup> /8	
Maximum Stroke Length	1 <sup>1</sup> /8	1 <sup>1</sup> /2	1 <sup>1</sup> /2	4	
Cycles / Min. (1/2" stroke)	37	34	34	38	
Working Height Up to Die	41 <sup>1</sup> /2	41 <sup>1</sup> / <sub>4</sub>	41 <sup>1</sup> / <sub>4</sub>	41 <sup>1</sup> / <sub>4</sub>	
ANGLE SHEARING					
Shearing Capacity	50 Ton	66 Ton	66 Ton	120 Ton	
Shearing Cylinder Stroke Length				2	
At 90° Shearing	3 x 3 x <sup>1</sup> / <sub>4</sub>	4 x 4 x <sup>5</sup> / <sub>16</sub>	4 x 4 x <sup>5</sup> / <sub>16</sub>	5 x 5 x <sup>1</sup> / <sub>2</sub>	
Working Height	39 <sup>1</sup> /2	42	42	41	
FLAT SHEARING	-				
Flat Bar Shear	12 x <sup>3</sup> / <sub>8</sub>	14 x <sup>5</sup> / <sub>8</sub>	14 x <sup>9</sup> / <sub>16</sub>	16 x <sup>5</sup> / <sub>8</sub>	
Blade Length	12 <sup>1</sup> / <sub>4</sub>	14 <sup>1</sup> /4	14 <sup>1</sup> / <sub>4</sub>	16 <sup>1</sup> /8	
Working Height	31 <sup>1</sup> /2	31 <sup>3</sup> / <sub>4</sub>	31 <sup>3</sup> / <sub>4</sub>	28 <sup>1</sup> / <sub>2</sub>	
BAR SHEARING	_			_	
Round Bar Shear	ø1 <sup>1</sup> /8	ø1 <sup>1</sup> /2	ø1 <sup>1</sup> /2	ø1 <sup>3</sup> / <sub>4</sub>	
Square Bar Shear	1 x 1	1 <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>2</sub>	1 <sup>3</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	
Channel Shear	3*	4*	4*	6*	
I Beam Shear				6*	
NOTCHING					
Rectangular Notcher (W x D x T)	2 x 3 <sup>1</sup> / <sub>2</sub> x <sup>1</sup> / <sub>4</sub>	2 x 3 <sup>1</sup> / <sub>2</sub> x <sup>5</sup> / <sub>16</sub>		2 <sup>1</sup> / <sub>2</sub> x 3 <sup>1</sup> / <sub>2</sub> x <sup>1</sup> / <sub>2</sub>	
Vee-Notcher (Side x Side x T)	3 <sup>1</sup> / <sub>2</sub> x 3 <sup>1</sup> / <sub>2</sub> x <sup>5</sup> / <sub>16</sub> *	3 <sup>1</sup> / <sub>2</sub> x 3 <sup>1</sup> / <sub>2</sub> x <sup>5</sup> / <sub>16</sub> *		4 x 4 x <sup>1</sup> / <sub>2</sub> *	
Channel Notching				7~8	
Working Height	41 <sup>1</sup> / <sub>4</sub>	41 <sup>1</sup> / <sub>4</sub>		41 <sup>1</sup> / <sub>4</sub>	
SPECIAL TOOLING					
Large Vee-Notcher (Side x Side x T)				5 <sup>3</sup> / <sub>4</sub> x 5 <sup>3</sup> / <sub>4</sub> x <sup>3</sup> / <sub>8</sub> *	
Single Vee Press Brake (W x T)	6 x <sup>5</sup> / <sub>16</sub> *	6 x <sup>5</sup> / <sub>16</sub> *		10 x <sup>9</sup> / <sub>16</sub> *	
Multi Vee Press Brake (W x T)	10 x <sup>1</sup> /8*	10 x <sup>1</sup> /4*	12 x <sup>1</sup> /4 <sup>**</sup>	20 x <sup>3</sup> / <sub>16</sub> *	
Angle Bending	2 <sup>1</sup> / <sub>2</sub> x <sup>5</sup> / <sub>16</sub> *	2 <sup>1</sup> / <sub>2</sub> x <sup>5</sup> / <sub>16</sub> *	2 <sup>1</sup> / <sub>2</sub> x <sup>5</sup> / <sub>16</sub> *	4 x <sup>5</sup> / <sub>16</sub> *	
Pipe Notching	ø2*	ø2*	ø2*	ø4*	
OTHER					
Electric Power (HP)	5 HP	7.5 HP	7.5 HP	10 HP	
Net Weight (Apr.)	1875 lb	2625 lb	2830 lb	6075 lb	
Gross Weight (Apr.)	2100 lb	2925 lb	3160 lb	6400 lb	
Machine Dimension (Apr.)	41 x 30 x 59	47 x 30 x 64	54 x 30 x 64	71 x 41 x 74	
Madrinic Differioion (Apr.)					

\* : Optional Tooling

\*\* : The multi-vee press brake is a standard station on the IW-66KB; notcher is not included.

Note: Based on low carbon / mild steel material strength of 65,000 PSI tensile. Design and specifications subject to change without notice.



### **IW-50M**

Unit: inch

The IW-50M has four standard stations, capable of a wide range of applications. The punching station can be converted into a notching station. IW-50M is heavier and stronger than other competitive machines. This durable and economical model is perfect for small shops with a limited budget.



IW-50M

# Single Cylinder Model

Capacities and Specifications Unit: inch					
MODEL	IW-50M				
PUNCHING					
Punching Pressure	50 Ton				
Punch Capacity	ø <sup>3</sup> / <sub>4</sub> x <sup>5</sup> / <sub>8</sub>				
(Diameter x Thickness)	ø1 <sup>1</sup> / <sub>2</sub> x <sup>5</sup> / <sub>16</sub>				
Throat Depth	7				
Maximum Stroke Length	1 <sup>3</sup> /8				
Cycles / Min. (1/2" stroke)	31				
Working Height Up to Die	38 <sup>1</sup> / <sub>4</sub>				
ANGLE SHEARING					
At 90° Shearing	3 x 3 x <sup>1</sup> / <sub>4</sub>				
At 45° Miter Shearing	2 x 2 x <sup>1</sup> / <sub>4</sub>				
Working Height	44				
FLAT SHEARING					
Flat Bar Shear	14 x <sup>5</sup> / <sub>16</sub>				
(Width x Thickness)	7 x <sup>1</sup> / <sub>2</sub>				
Blade Length	14 <sup>1</sup> / <sub>4</sub>				
Angle Flange Trim	3				
Working Height	38 <sup>1</sup> / <sub>4</sub>				
BAR SHEARING					
Round Bar Shear	ø1				
Square Bar Shear	1 x 1				
Working Height	47				
OTHER					
Electric Power (HP)	5 HP				
Net Weight (Apr.)	1850 lb				
Gross Weight (Apr.)	2075 lb				
Machine Dimension (Apr.)(LxWxH)	50 x 28 x 53				
Packing Dimension (Apr.)(LxWxH)	61 x 34 x 64				

Note: Based on mild steel material strength of 65,000 PSI tensile. Design and specifications subject to change without notice. A 1-hole die holder and a 2-piece gauging table are provided as standard equipment on all single cylinder models.



# **Double Cylinder Models**

The double cylinder "S/SD" series are in the Sunrise tradition of well engineered ironworkers built for high power, quality, and reliability. These ironworkers have two control foot pedals, and separate operations can be safely performed simultaneously. The low pressure setting for tool change provides maximum operation safety. The long punching cylinder stroke and deep throat enable mounting a wide range of special equipment. The large punching base with the "T-slot" mounting provides a solid base for securing the punching tooling, as well as a wide range of optional and custom designed tooling.



#### **Capacities and Specifications**

MODEL		IW-66S IW-66SD	IW-88S IW-88SD	IW-110S IW-110SD	IW-135S IW-135SD	IW-185SD
PUNCHING						
Punching Pressure		66 Ton	88 Ton	110 Ton	135 Ton	180 Ton
Punch Capacity		ø <sup>7</sup> / <sub>8</sub> x <sup>3</sup> / <sub>4</sub>	ø1 x <sup>7</sup> / <sub>8</sub>	ø1 <sup>1</sup> / <sub>8</sub> x 1	ø1 <sup>1</sup> / <sub>4</sub> x 1 <sup>1</sup> / <sub>16</sub>	ø1 <sup>7</sup> / <sub>16</sub> x 1 <sup>1</sup> /,
Diameter x Thickness)		ø2 x <sup>5</sup> / <sub>16</sub>	ø2 x <sup>1</sup> / <sub>2</sub>	ø2 x <sup>9</sup> / <sub>16</sub>	ø2 x <sup>11</sup> / <sub>16</sub>	ø2 x <sup>7</sup> /8
Throat Depth	S:	12	12	12	12	
	SD:	20	20	20	20	20
Aaximum Stroke Length		4	4	4	4	4
Cycles / Min. (3/4" stroke)		30	29	28	28	29
Vorking Height Up to Die		39 <sup>3</sup> / <sub>4</sub>	41 <sup>1</sup> / <sub>4</sub>	41	42	41 <sup>1</sup> / <sub>4</sub>
ANGLE SHEARING						
t 90 ° Shearing		5 x 5 x <sup>1</sup> / <sub>2</sub>	6 x 6 x <sup>1</sup> / <sub>2</sub>	6 x 6 x <sup>9</sup> / <sub>16</sub>	6 x 6 x <sup>11</sup> / <sub>16</sub>	8 x 8 x <sup>3</sup> / <sub>4</sub>
t 45° Miter Shearing		2 <sup>1</sup> / <sub>2</sub> x 2 <sup>1</sup> / <sub>2</sub> x <sup>5</sup> / <sub>16</sub>	3 x 3 x <sup>3</sup> / <sub>8</sub>	3 x 3 x <sup>3</sup> / <sub>8</sub>	3 x 3 x <sup>3</sup> / <sub>8</sub>	3 x 3 x <sup>3</sup> / <sub>8</sub>
Vorking Height		43 <sup>3</sup> / <sub>4</sub>	45 <sup>3</sup> /4	47 <sup>7</sup> /8	46 <sup>1</sup> /2	46 <sup>1</sup> /2
LAT SHEARING					_	
lat Bar Shear		14 x <sup>9</sup> / <sub>16</sub>	18 x <sup>9</sup> / <sub>16</sub>	24 x <sup>5</sup> / <sub>8</sub>	24 x <sup>11</sup> / <sub>16</sub>	30 x <sup>3</sup> / <sub>4</sub>
Width x Thickness)		10 x <sup>3</sup> / <sub>4</sub>	12 x <sup>7</sup> / <sub>8</sub>	16 x <sup>3</sup> / <sub>4</sub>	16 x 1	16 x 1 <sup>1</sup> / <sub>8</sub>
Blade Length		14 <sup>1</sup> / <sub>4</sub>	18 <sup>1</sup> / <sub>4</sub>	24 <sup>3</sup> /8	24 <sup>3</sup> /8	30 <sup>1</sup> / <sub>4</sub>
Angle Flange Trim		4	4	4	4	4 <sup>3</sup> /4
Vorking Height		36	36 <sup>1</sup> / <sub>2</sub>	37 <sup>1</sup> / <sub>2</sub>	36	36
BAR SHEARING						
Round Bar Shear		ø1 <sup>1</sup> /2	ø1 <sup>3</sup> / <sub>4</sub>	ø1 <sup>3</sup> / <sub>4</sub>	ø2	ø21/4
Square Bar Shear		1 <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>2</sub>	1 <sup>3</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	1 <sup>3</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	2 x 2	2 <sup>1</sup> / <sub>4</sub> x 2 <sup>1</sup> / <sub>4</sub>
Channel Shear		5*	6*	6*	7*	8*
Beam Shear			6*	6*	7*	8*
Vorking Height		48	50	52 <sup>1</sup> /2	51 <sup>1</sup> /2	54
IOTCHING						
Rectangular Notcher (W x D	x T)	2 x 3 <sup>1</sup> / <sub>2</sub> x <sup>3</sup> / <sub>8</sub>	2 x 3 <sup>1</sup> / <sub>2</sub> x <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub> x 3 <sup>1</sup> / <sub>2</sub> x <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub> x 3 <sup>1</sup> / <sub>2</sub> x <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub> x 3 <sup>1</sup> / <sub>2</sub> x <sup>§</sup>
/ee-Notcher (Side x Side x T	)	3 <sup>1</sup> / <sub>2</sub> x 3 <sup>1</sup> / <sub>2</sub> x <sup>3</sup> / <sub>8</sub> *	$3^{1}/_{2} \ge 3^{1}/_{2} \ge 1/_{2}^{*}$	4 x 4 x <sup>1</sup> / <sub>2</sub> *	4 x 4 x <sup>1</sup> / <sub>2</sub> *	4 x 4 x <sup>5</sup> / <sub>8</sub> *
Vorking Height		35 <sup>3</sup> / <sub>4</sub>	36 <sup>1</sup> / <sub>2</sub>	37 <sup>1</sup> /2	36 <sup>1</sup> / <sub>4</sub>	36 <sup>1</sup> / <sub>4</sub>
PECIAL TOOLING						
arge Vee-Notcher (Side x Si	de x T)	5 <sup>3</sup> / <sub>4</sub> x 5 <sup>3</sup> / <sub>4</sub> x <sup>5</sup> / <sub>16</sub> *	$5^{3}_{4} \times 5^{3}_{4} \times 3^{3}_{8}^{*}$	$5^{3}_{4} \ge 5^{3}_{4} \ge 1_{2}^{*}$	5 <sup>3</sup> / <sub>4</sub> x 5 <sup>3</sup> / <sub>4</sub> x <sup>1</sup> / <sub>2</sub> *	5 <sup>3</sup> / <sub>4</sub> x 5 <sup>3</sup> / <sub>4</sub> x <sup>1</sup>
Single Vee Press Brake (W x	T)	10 x <sup>1</sup> / <sub>2</sub> *	10 x <sup>1</sup> /2*	10 x <sup>9</sup> / <sub>16</sub> *	10 x <sup>3</sup> / <sub>4</sub> *	10 x <sup>3</sup> / <sub>4</sub> *
/lulti Vee Press Brake (W x T	)	20 x <sup>3</sup> / <sub>16</sub> *	20 x <sup>3</sup> / <sub>16</sub> *	27 <sup>1</sup> / <sub>2</sub> x <sup>3</sup> / <sub>16</sub> *	27 <sup>1</sup> / <sub>2</sub> x <sup>3</sup> / <sub>16</sub> *	27 <sup>1</sup> / <sub>2</sub> x <sup>3</sup> / <sub>16</sub>
Angle Bending		4 x <sup>1</sup> / <sub>4</sub> *	4 x <sup>1</sup> / <sub>4</sub> *	4 x <sup>1</sup> / <sub>2</sub> *	4 x <sup>1</sup> / <sub>2</sub> *	4 x <sup>1</sup> / <sub>2</sub> *
Pipe Notching		ø4*	ø4*	ø4*	ø4*	ø4*
THER						
lectric Power (HP)		7.5 HP	10 HP	10 HP	15 HP	20 HP
let Weight (Apr.)	S:	3975 lb	4825 lb	6525 lb	7375 lb	
	SD:	4875 lb	5850 lb	7625 lb	8725 lb	10925 lb
aross Weight (Apr.)	S:	4300 lb	5210 lb	7025 lb	7925 lb	
	SD:	5250 lb	6360 lb	8175 lb	9325 lb	11600 lb
Achine Dimension (Apr.)	S:	67 x 32 x 68	73 x 33 x 70	83 x 34 x 72	86 x 41 x 73	
LxWxH)	SD:	82 x 32 x 68	87 x 33 x 70	97 x 34 x 72	98 x 41 x 73	107 x 43 x 8
Packing Dimension (Apr.)	S:	78 x 38 x 79	83 x 39 x 81	94 x 40 x 83	97 x 47 x 84	
LxWxH):	SD:	93 x 38 x 79	98 x 39 x 81	108 x 40 x 83	109 x 47 x 84	118 x 49 x 9

\* : Optional Tooling

Note: Based on low carbon / mild steel material strength of 65,000 PSI tensile. Design and specifications subject to change without notice.

A 2-hole overhung die holder and a 2-piece gauging table are provided as standard equipment on all dual cylinder ironworkers.

Unit: inch



# Hydraulic Punching Machine



\*Bar shearing.



\*Channel shearing.



\*Angle shearing.



\*Flat bar shearing.



\*Rectangular notcher.

		PM-38T	PM-60T	PM-88T	DM 4001 T	DM 4551 T	DM 0001
MODEL		PM-38LT PM-38XT	PM-60LT PM-60XT	PM-88LT PM-88XT	PM-130LT PM-130XT	PM-175LT PM-175XT	PM-220L1 PM-220X <sup>-</sup>
PUNCHING							
Punching Pressure		38 Ton	60 Ton	88 Ton	130 Ton	175 Ton	220 Ton
Punch Capacity		ø <sup>11</sup> / <sub>16</sub> x <sup>9</sup> / <sub>16</sub>	ø <sup>7</sup> /8 x <sup>11</sup> / <sub>16</sub>	ø1 x <sup>7</sup> / <sub>8</sub>	ø1 <sup>1</sup> / <sub>4</sub> x 1 <sup>1</sup> / <sub>16</sub>	ø1 <sup>3</sup> / <sub>8</sub> x 1 <sup>1</sup> / <sub>4</sub>	ø1 <sup>5</sup> / <sub>8</sub> x 1 <sup>3</sup> / <sub>8</sub>
(Diameter x Thickness)		ø2 x <sup>3</sup> / <sub>16</sub>	ø2 x <sup>5</sup> / <sub>16</sub>	ø2 x <sup>7</sup> / <sub>16</sub>	ø2 x <sup>11</sup> / <sub>16</sub>	ø2 x <sup>7</sup> /8	ø2 x 1 <sup>1</sup> /8
Throat Depth	T:	12	12	12			
	LT:	20	20	20	20	20	20
	XT:	30	30	30	30	30	30
Maximum Stroke Length		4	4	4	4	4	4
Cycles/Min. (3/4" stroke)		41	28	28	26	27	28
Table Size (W x D)	T:	27 <sup>1</sup> / <sub>2</sub> x 20	27 <sup>1</sup> / <sub>2</sub> x 20	27 <sup>1</sup> / <sub>2</sub> x 20			
. ,	LT:	$27^{1}/_{2} \times 27^{1}/_{2}$	$271/_{2} \times 271/_{2}$	$271/_2 \times 271/_2$	27 <sup>1</sup> / <sub>2</sub> x 27 <sup>1</sup> / <sub>2</sub>	27 <sup>1</sup> / <sub>2</sub> x 27 <sup>1</sup> / <sub>2</sub>	27 <sup>1</sup> / <sub>2</sub> x 27 <sup>1</sup> / <sub>2</sub>
	XT:	$27^{1}/_{2} \times 37^{1}/_{2}$	27 <sup>1</sup> / <sub>2</sub> x 37 <sup>1</sup> / <sub>2</sub>	$271/_2 \times 371/_2$	$27^{1}/_{2} \times 37^{1}/_{2}$	$271/_{2} \times 371/_{2}$	27 <sup>1</sup> / <sub>2</sub> x 37 <sup>1</sup> / <sub>2</sub>
Working Height Up to Die		41 <sup>1</sup> / <sub>4</sub>	41 <sup>1</sup> / <sub>4</sub>	41 <sup>1</sup> / <sub>4</sub>	41 <sup>1</sup> / <sub>4</sub>	41 <sup>1</sup> / <sub>4</sub>	41 <sup>1</sup> / <sub>4</sub>
OPTIONAL TOOLING			4				4
Largest Hole*		ø6 x <sup>1</sup> / <sub>16</sub>	ø6 x <sup>1</sup> /8	ø6 x <sup>3</sup> / <sub>16</sub>	ø6 x <sup>1</sup> / <sub>4</sub>	ø6 x <sup>5</sup> / <sub>16</sub>	ø6 x <sup>3</sup> /8
Single Vee Press Brake (V	V x T)*	$10 \times \frac{1}{2}$	10 x <sup>5</sup> /8	10 x <sup>5</sup> / <sub>8</sub>	10 x <sup>3</sup> / <sub>4</sub>	10 x <sup>3</sup> / <sub>4</sub>	10 x <sup>3</sup> / <sub>4</sub>
Multi Vee Press Brake (W	•		20 x <sup>3</sup> / <sub>16</sub>	20 x <sup>3</sup> / <sub>16</sub>	27 <sup>1</sup> / <sub>2</sub> x <sup>3</sup> / <sub>16</sub>	$27^{1}/_{2} \times \frac{3}{16}$	27 <sup>1</sup> / <sub>2</sub> x <sup>3</sup> / <sub>16</sub>
Angle Bending*			$3 \times \frac{1}{4}$	4 x <sup>3</sup> /8	$4 \times \frac{1}{2}$	$4 \times \frac{1}{2}$	$4 \times \frac{1}{2}$
Rectangular Notcher (WxI	DxT)*	$2^{1}/_{2} \times {}^{5}/_{16}$ $2^{1}/_{2} \times {}^{3}/_{2} \times {}^{3}/_{16}$	•	$2^{1}/_{2} \times 3^{1}/_{2} \times 3^{3}/_{8}$	$2^{1}/_{2} \times 3^{1}/_{2} \times 1/_{2}$	$2^{1}/_{2} \times 3^{1}/_{2} \times 1/_{2}$	2 <sup>1</sup> / <sub>2</sub> x 3 <sup>1</sup> / <sub>2</sub> x <sup>1</sup>
Vee Notcher (Side x Side		$5^{3}_{4} \times 5^{3}_{4} \times 3^{1}_{16}$		$5^{3}/_{4} \times 5^{3}/_{4} \times 3^{3}/_{8}$	$5^{3}/_{4} \times 5^{3}/_{4} \times 1/_{2}$	$5^{3}/_{4} \ge 5^{3}/_{4} \ge 1/_{2}$	5 <sup>3</sup> / <sub>4</sub> x 5 <sup>3</sup> / <sub>4</sub> x <sup>1</sup>
Pipe Notcher (Max diamet		ø4	ø4	ø4	074 × 074 × 72 Ø4	ø4	ø4
Flat Bar Shearing*	,	7 x <sup>3</sup> / <sub>16</sub>	7 x <sup>1</sup> / <sub>4</sub>	7 x <sup>3</sup> /8	$7 \times \frac{1}{2}$	7 x <sup>5</sup> /8	7 x <sup>5</sup> / <sub>8</sub>
Angle Shearing*		$3 \times 3 \times \frac{1}{4}$	3 x 3 x <sup>1</sup> / <sub>4</sub>	$4 \times 4 \times \frac{1}{2}$	$4 \times 4 \times \frac{1}{2}$	$4 \times 4 \times \frac{1}{2}$	$4 \times 4 \times \frac{1}{2}$
Round Bar Shearing*		ø1 <sup>1</sup> /8	ø1 <sup>1</sup> / <sub>4</sub>	ø1 <sup>1</sup> /4	ø1 <sup>1</sup> / <sub>4</sub>	ø1 <sup>1</sup> / <sub>4</sub>	ø1 <sup>1</sup> / <sub>4</sub>
Square Bar Shearing*		1 <sup>1</sup> / <sub>8</sub> x 1 <sup>1</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub> x 1 <sup>1</sup> / <sub>4</sub>	$1^{1}/_{4} \times 1^{1}/_{4}$	$1^{1}/_{4} \times 1^{1}/_{4}$	$1^{1}/_{4} \times 1^{1}/_{4}$	1 <sup>1</sup> / <sub>4</sub> x 1 <sup>1</sup> / <sub>4</sub>
Channel Shearing*		1.18 × 1.18	4 x 2	4 x 2	4 x 2	4 x 2	4 x 2
OTHER			4 X Z	4 X Z	4 X Z	4 X Z	4 X Z
Electric Power		5 HP	5 HP	7.5 HP	10 HP	15 HP	20 HP
Net Weight (Apr.)	T:	2650 lb	3200 lb	3925 lb			2011
Not Weight (Apr.)	LT:	3325 lb	4100 lb	4640 lb	6275 lb	 7840 lb	9790 lb
	XT:				7950 lb		
Gross Weight (Apr.)	T:	4075 lb 2875 lb	4875 lb 3600 lb	6275 lb 4325 lb		10275 lb	12350 lb
Groos Woight (Apr.)	LT:		3600 lb		 6800 lb	 8525 lb	 10600 lb
	XT:	3625 lb	4525 lb	5075 lb 6750 lb			
Machine Dimension (Apr.)		4425 lb	5350 lb	6750 lb	8525 lb	11025 lb	13150 lb
(L x W x H)		43 x 33 x 70	46 x 33 x 77	51 x 34 x 78	<u></u>	74 × 41 × 00	
	LT: VT:	56 x 33 x 71	60 x 33 x 77	64 x 34 x 78	68 x 38 x 80	74 x 41 x 82	78 x 50 x 83
Dooking Dimension (Arra)	XT:	72 x 33 x 72	76 x 33 x 77	81 x 34 x 78	86 x 38 x 80	94 x 41 x 84	98 x 50 x 86
Packing Dimension (Apr.)	T:	56 x 38 x 79	59 x 38 x 87	63 x 40 x 87			
$(L \times W \times H)$	LT:	69 x 38 x 80	73 x 38 x 87	77 x 40 x 87	81 x 44 x 90	87 x 47 x 91	91 x 56 x 92
	XT:	85 x 38 x 81	88 x 38 x 87	93 x 40 x 87	98 x 44 x 90	106 x 47 x 94	110 x 56 x 95

\* : Optional Tooling

Note: Based on low carbon / mild steel material strength of 65,000 PSI tensile. Design and specifications subject to change without notice. A 2-hole strutural die holder and a 2-piece gauging table are provided as standard equipment on all punching machines.

- The patented dual-piston hydraulic cylinder enables the machine to retract faster, and also makes our cylinder slimmer, which brings a better appearance to the machine.
- Punching machines ranging from 38 to 220 tons of punching capacities, combined with different throat depths to choose from, provides a complete range of models to meet our customer's wide range of requirements.
- All optional tooling used on the punching station of S/SD ironworkers can also be used on the PM models, turning the punching machine into a universal machine.

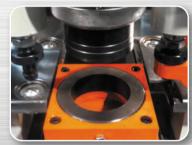


# Semi-Automatic

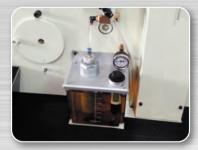
- Preview function before executing program
- Four pre-programmed patterns: Line, Array, Arc, and Custom
- Spotting function using low pressure mode
- Maximum table travel speed: 32' /min



\*Optional angle leg up stripper



oversize punch



\*Auto lubrication system with adjustable frequency and oil amount for longer tool life.



\*Oil cooling system

The semi-automatic CNC positioning tables from SUNRISE are plate, angle and channel positioning systems with simple user-friendly interfaces. The CNC positioning table is available as a factory-installed option on Dual-Cylinder Ironworker or Punching Machine with a 20" or larger throat depth. The operation is CNC controlled using a pendant mounted controller featuring easy programming and a virtually indestructible design. The operator simply positions the plate against the CNC-controlled X and Y stops and initiates the punch sequence. Ideal for base plates, connection plates, angles, channels and more.

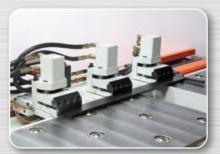


# **Fully-Automatic**



### **Optional Multi-Tool System:**

- · Standard punches and dies used on multi-tool system
- Each punch is individually controlled by pneumatic cylinders
- Tooling size and shape shown in preview screen



Operate in semi-automatic mode with use of gauging piece allows punching holes near the edge of the material. (Fully Automatic models only)



\*Hydraulic stripper to reduce material deformation is standard equipment.

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Fully-automatic CNC systems from SUNRISE deliver highly efficient and accurate positioning that will improve your productivity. The controller is easy to learn and operate, so you can begin operations almost immediately. Hydraulic clamps come with a pressure sensor for a strong grip on the material, and come standard on Sunrise automatic CNC tables. Moreover, the included hydraulic stripper comes with exchangeable plates to suit a variety of punching operations. Ball transfer units on the support table provide smooth material movement, and the cover is complete with an interlock switch for ensured operator safety.



PM-88LT-CNC 40" x 20" Fully-Automatic Table

#### **PRODUCT CATALOG**



Sunrise Fluid Power Inc. has been manufacturing hydraulic products and equipment since 1960. SUNRISE has installed thousands of ironworkers, punching machines and CNC systems in the United States and over 22,000 in more than 50 countries around the world. Service, parts, and lifetime technical support are based in Maryland and our dealers around the country. SUNRISE Ironworkers are designed with multi-functions to save labor, time, energy, and cost. This versatile aspect allows the SUNRISE Ironworkers to meet the diversified needs of the metal fabricating industry. Currently, Sunrise has the highest reviews of any ironworker brand on the market today, including a, 'Best in the Business', 3 year parts and 1 year labor warranty!





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