FRANKLIN

FMI

Infinite Solutions. Ultimate Performance.

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HEAVY DUTY HYDRAULIC C-FRAME PRESSES

Series F5
Flange Press

Series W5
Web Press

PORTABLE PRESSES

SERIES F5 HEAVY DUTY

8 Models • 30 Through 275 Capacity

• STANDARD COMPONENTS FURNISHED WITH PRESS
– Standard Coupling Nut
– Coupling Nut Wrench
– Replaceable Die Pocket
– Handle Bar w/Grips
– Manual
– Punch & Die

• OPTIONAL EQUIPMENT
– Hydraulic Unit (460 Volt Standard)
– Hose & Control Cable
  – (2) Hoses 20' Long
  – Control Switches w/ Boxes
  – Control Cable (From Control Switches To The Hydraulic Control Valves)
– Tooling
– Split Coupling Nuts

Model F570X6 Shown

Available in 8 Models, these versatile presses are primarily used for piercing the flange sections of beams, angle, channel and bar. They employ standard tooling and are designed for high fabrication production. Fast cycle times and portability promotes reduced material handling and a phenomenal reduction in costly man hours. In addition to the piercing, these presses may be tooled for stamping, notching and riveting. Heavy duty construction allows for long maintenance-free production hours.

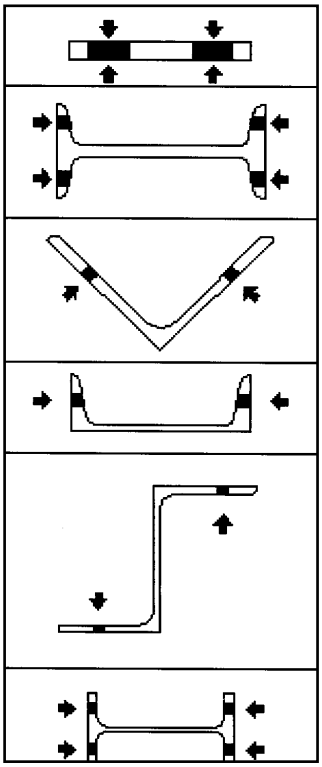
• SPECIFICATIONS ■ **Indicates stock presses** ■ **Indicates made to order presses**

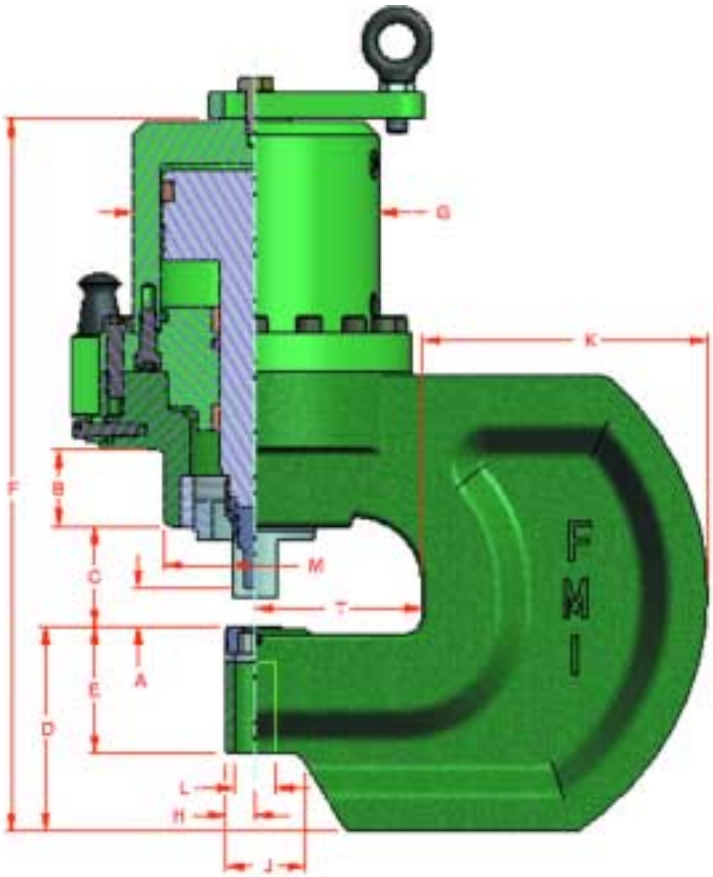
PRESS MODEL	PRESS CAPACITY IN TONS	MAXIMUM HOLE DIAMETER	LENGTH OF STROKE	HYDRAULIC POWER UNIT	HOSE AND CONTROL CABLE	SUSP. SPRING	TOOLING SERIES
F530X3	30 TONS	13/16"	1"	FMI-500-5HP FMI-500-3HP	500-1/4-20 500-1/4-20	F103	PUNCH C-740 DIE C-720
F550X4	50 TONS	1-1/2"	1-5/8"	FMI-500-5HP FMI-500-3HP FMI-500-10HP	500-1/4-20 500-1/4-20 500-3/8-20		PUNCH C-770 DIE C-740
F570X6	70 TONS						
F5100X6	100 TONS	1-1/2"	2"	FMI-500-10HP	500-3/8-20	F1035	
F5125X6	125 TONS	1-1/2"	2 1/8"	FMI-500-10HP OR FMI-512-15HP	500-3/8-20 OR 500-1/2-20		PUNCH C-7501 DIE C-7502 WITH C-770 PUNCH ADAPTER ASS'Y
F5175X6	175 TONS	2"				F2035	
F5175X12	175 TONS			FMI-512-15XP OR FMI-532-20HP	500-1/2-20 OR 500-1/2-20		
F5275X12	275 TONS						

HYDRAULIC FLANGE PRESSES

Dimensions and Specifications

Applications





• SPECIFICATIONS **■ Indicates stock presses** **■ Indicates made to order presses**

PRESS MODEL NO.	F530X3	F550X4	F570X6	F5100X6	F5125X6	F5175X6	F5175X12	F5275X12
TONNAGE	30	50	70	100	125	175	175	275
THROAT DEPTH T	3-1/8	4-1/4	6-1/4	6-1/4	6-1/2	6-1/2	12-1/2	12-1/2
A	3/4	1-5/16	1-5/16	1-9/16	2	2	2	2
B	2-3/4	4-1/8	6-11/16	6	6	8	8	12
C	2	2-5/16	2-1/2	3-7/8	3-7/8	4-1/4	4-1/4	4-1/4
D	3-1/4	4-5/8	6-13/16	7-7/8	7-7/8	12	15	17-1/2
E	2-3/4	3-3/8	3-3/8	4-7/8	4-7/8	6-1/8	6-1/8	6-1/2
F	13	18-13/16	24-5/16	27-1/8	29-3/16	36	39	50
G	5-1/2	7-1/4	8	9-1/2	11	12-1/2	12-1/2	15
H	11/16	1-1/8	1-1/8	1-1/8	1-1/8	2	2	2-3/8
J	2	2-1/4	2-1/8	2-5/8	2-5/8	5	5-1/2	5-1/2
K	4-1/4	5	8-1/4	11	11	20	25	30
L	7/8	1-5/8	1-5/8	1-5/8	1-5/8	2-1/8	2-18	2-5/8
M	2-1/2	2-1/2	2-3/4	3-1/2	3-1/2	4-1/2	4-1/2	6
APPROX.WEIGHT	90#	175#	380#	430#	530#	2,100#	3,000#	3,900#

SERIES W5 HEAVY DUTY

8 Models • 30 Through 275 Capacity

• STANDARD COMPONENTS FURNISHED WITH PRESS
– Standard Coupling Nut
– Coupling Nut Wrench
– Replaceable Die Pocket
– Handle Bar w/Grips
– Manual
– Punch & Die

• OPTIONAL EQUIPMENT
– Hydraulic Unit (460 Volt Standard)
– Hose & Control Cable
  – (2) Hoses 20' Long
  – Control Switches w/ Boxes
  – Control Cable (From Control Switches To The Hydraulic Control Valves)
– Tooling
– Split Coupling Nuts

Model W5100X18 Shown

Available in 8 models, these versatile presses are primarily used for piercing the web sections of wide flange beams and channels. Plate, angles and a wide variety of structurals may be pierced in a fraction of time required by burning or drilling. Franklin assures rugged construction and offers a wide variety of punches, dies, and accessories for the presses. Versatility of applications is the element of the web series presses.

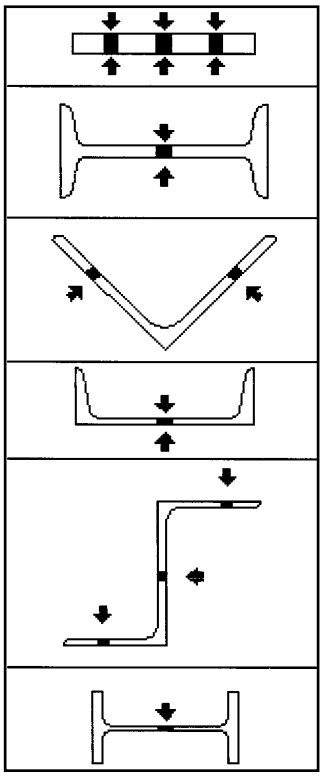
• SPECIFICATIONS ■ **Indicates stock presses** ■ **Indicates made to order presses**

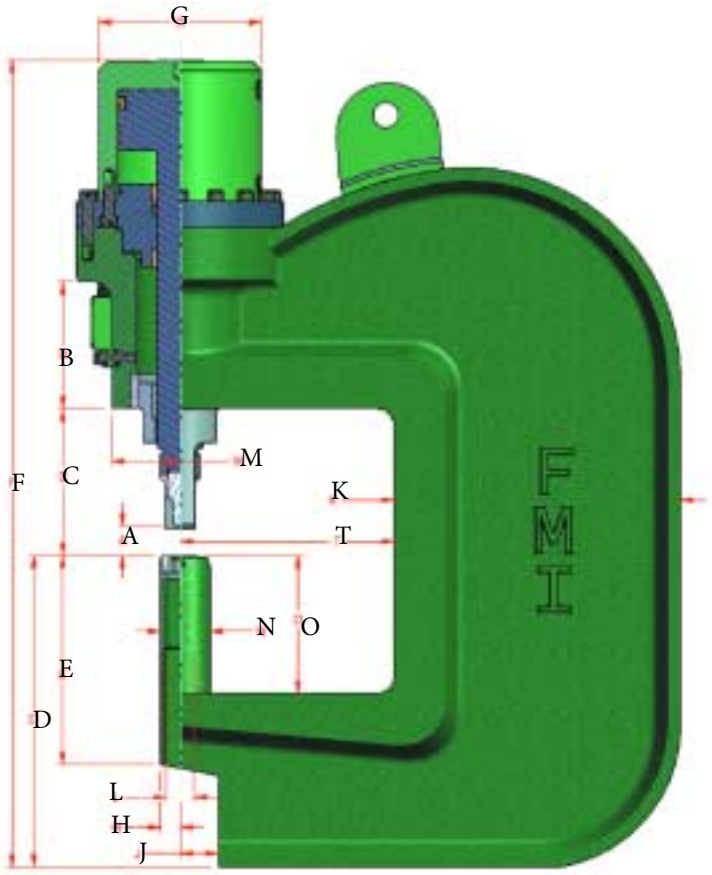
PRESS MODEL	PRESS CAPACITY IN TONS	MAXIMUM HOLE DIAMETER	LENGTH OF STROKE	HYDRAULIC POWER UNIT	HOSE AND CONTROL CABLE	SUSP. SPRING	TOOLING SERIES
W530X4	30 TONS	13/16"	1"	FMI-500-3HP FMI-500-5HP	500-1/4-20 500-1/4-20	F103	PUNCH C-740 DIE C-720
W550X7	50 TONS	1-1/2"	1-5/8"	FMI-500-3HP FMI-500-5HP FMI-500-10HP	500-1/4-20 500-3/8-20 500-3/8-20	F103	PUNCH C-770 DIE C-740
W570X8	70 TONS		2"			F1035	
W5100X12	100 TONS	1-1/2"	2"	FMI-500-10HP FMI-512-15HP	500-3/8-20 500-1/2-20	F2035	PUNCH C-770 DIE C-740
W5100X18							
W5100X30							
W5125X12	125 TONS	2"	2 1/2"	FMI-512-15XP OR FMI-532-20HP	500-1/2-20 OR 500-1/2-20		PUNCH C-7501 DIE C-7502 C-770 PUNCH ADAPTER ASS'Y
W5175X18	175 TONS						

HYDRAULIC WEB PRESSES

Dimensions and Specifications

Applications





• SPECIFICATIONS **■ Indicates stock presses** **■ Indicates made to order presses**

cast frame fabricated frame

PRESS MODEL NO.	W530X4	W550X7	W570X8	W5100X12	W5100X18	W5100X30	W5125X12	W5175X18
TONNAGE	30	50	70	100	100	100	125	125
THROAT DEPTHT	4-1/4	7-1/2	8-1/2	12-3/4	18-1/2	31-1/2	12-3/4	18-1/2
A	3/4	1-5/16	1-5/16	1-9/16	1-9/16	1-9/16	2-1/2	2
B	2-3/8	4-9/16	5-9/16	7-1/16	7-13/16	7-13/16	6-5/8	7-13/16
C	2-5/8	5-1/8	5-3/8	7-5/8	8-1/2	8-1/2	7-1/2	8-1/2
D	6-1/2	11-5/8	12-7/8	18	21-1/2	27-5/8	21	28
E	4-1/2	8-3/4	8-3/8	12	17-3/8	17-3/8	17	18
F	20-7/16	30-3/4	34-3/4	46-1/2	50-1/2	56-3/8	53	62
G	6	7-1/4	8	9-1/2	9-1/2	9-1/2	11	12-1/2
H	11/16	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-3/4	2
J	2-3/16	2-1/2	3-7/8	4-1/2	4	4	4	4-3/4
K	1-15/16	2-3/4	2-7/8	2-7/8	2-7/8	2-7/8	4	4
L	7/8	1-5/8	1-5/8	1-5/8	1-5/8	1-5/8	2-1/4	2-1/8
APPROX. WEIGHT	225#	495#	760#	1,750#	2,400#	9,200#	4,600#	3,700#

PORTABLE HYDRAULIC POWER UNITS

Units listed below are for use with hydraulic presses

SPECIFICATIONS	FMI-500-3HP	FMI-500-5HP	FMI-500-10HP	FMI-512-15HP	FMI-532-20HP
Operating Pressure	5000 PSIG	5000 PSIG	5000 PSIG	5000 PSIG	500 PSIG
Pump Volume	1.25 GPM	2 GPM	4 GPM	12 GPM	32 GPM
Tank Capacity	10 GAL.	12 GAL.	12 GAL.	45 GAL.	45 GAL.
Hydraulic Fluid	ANTI-WEAR WITH 200 SUS @ 100 DEGREES F				
Filtering System	IN-TANK SUCTION	10 MICRON RETURN LINE W/ MAGNETIC PREFILTERATION			
Solenoid Valves	1 VALVE	1-5 VALVES (2 VALVES STANDARD)			
Motor	1-PHASE 115/230 VAC	TEFC, 1750 RPM, 3 PHASE 60 HZ 230/460 VAC			
Motor Starter	MECHANICAL START	STANDARD 460 VAC, OPTIONAL VOLTAGES 230, 575 OR 380 AT AN ADDITIONAL COST			

Franklin model 500-2V-10HP

- High quality hydraulic parts
- Heavy duty welded hydraulic reservoir and support frame
- 10 Micron tank top return line filter for easy replacement
- Unit constructed manifold valves, eliminate unnecessary piping
- Adjustable pressure relief
- 0—6000 Glycerine filled pressure gauge
- Industrial grade ball bearing, (TEFC) totally enclosed fan cooled, 3 phase, C face motors
- Temp and level sight glass
- Mounted on casters

- Single phase power source
- Compact design
- Vertical mounted motor with submerged pump
- In-tank filter at the suction of the pump
- Single station manifold
- 0—6000 Glycerine filled pressure gauge
- Temp and level sight glass
- Mounted on casters

Franklin model 500-1V-3HP

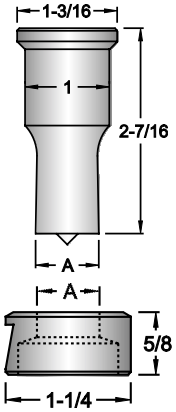
HYDRAULIC HOSE AND CONTROL ASSEMBLY

Horsepower	5HP	10HP	15/20HP
Part. No	500-1/4-20	500-3/8-20	500-1/2-20
Fittings	FJX37	FJX37	FJX37
Length	20'	20'	20'

*Optional lenght available see the quotation for the price per foot adder
— (2) Hose — Sized as indicated above
— Wire from the Control Switches to the Control Valve on the Hydraulic Unit
— Handle Bar Assembly with the (2) Control boxes (Consisting of)
— (1) Safety Interlock Switch
— (1) Rocker Up/Down Switch

TOOLING FOR HYDRAULIC PRESSES

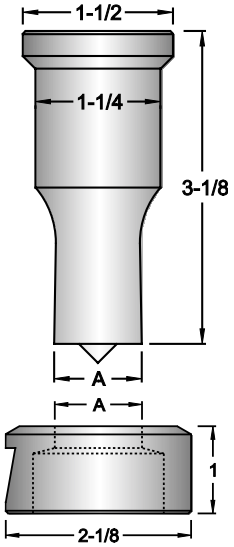
C-740



C-720

30 Ton

C-770

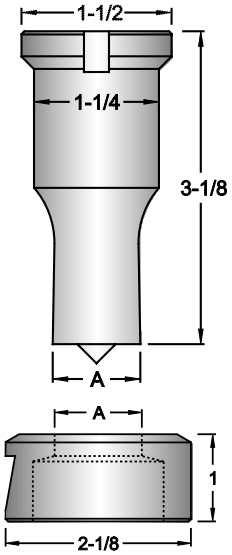


C-740

50-100 Ton Web
50-125 Ton Flange

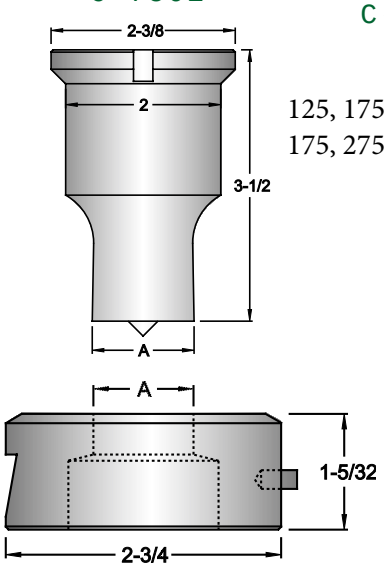
New machines use C-272F for shapes. Older ones use C-790 for shapes.

C-790



C-740 (Slot)

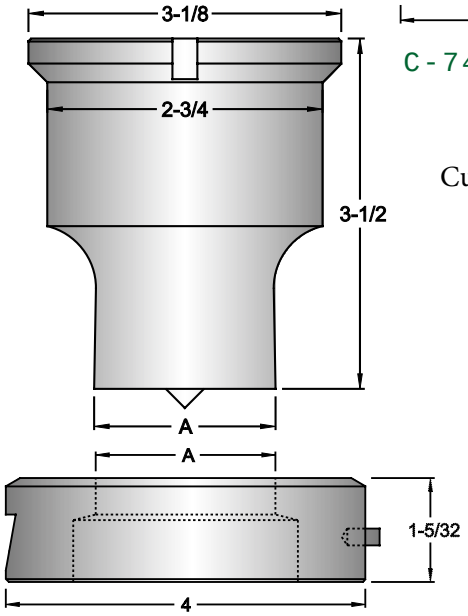
C-7501



C-7502

125, 175 Ton Web
175, 275 Ton Flange

C-5250P



C-5250D

Custom Machines

PRESS SIZING

The first step to sizing your new press is to "know what you are punching". Use the chart below with the material thickness and hole diameter required. For material other than the 60,000 psi ultimate shear strength, use the tonnage chart multiplier to find the tonnage required.

NOTE: If the tonnage required is over 85% of full press capacity, Franklin Manufacturing recommends going up to the next size press.

CALCULATION OF PERFORATING FORCE

The formula for the tonnage required to perforate a given material, using flat-faced punches and dies, is $F = \frac{LTS}{2000}$

F = Force in tons
L = Length of cut in inches. Use the circumference For round holes, perimeter for other shape holes.
T = Thickness of material in inches
S = Ultimate shear strength of material, in pounds per square inch (I.E. 60,000 PSI)

TONNAGE CHART MULTIPLIER			
Material	Ultimate Shear (80% of Tensile)	Maximum Tensile Strength	Multiplier
ASTM-A36	64,000 PSI	80 KSI	1.06
ASTM-A514	96,000 PSI	120 KSI	1.6
ASTM-A572-50	76,000 PSI	95 KSI	1.26
ASTM-A588	72,000 PSI	90 KSI	1.20
ASTM-A992	60,800 PSI	76 KSI	1.013
Aluminum	19,000 PSI	23.5 KSI	0.32

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When considering a Franklin C-Frame Portable Press, Franklin strongly urges careful analysis of your specific application. When properly applied your Franklin press will provide years of dependable service. The tonnage chart below will provide an approximate calculation of the tonnage required to pierce a given thickness material with the ultimate shear strength provided.

Tons Required for Material with 60,000 PSI Shear Strength

MATERIAL THICKNESS		HOLE DIAMETER																						
		1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1	1 1/16	1 1/8	1 3/16	1 1/4	1 5/16	1 3/8	1 1/2	1 3/4	2	2 1/2	3
3/16"	.187	4.4	5.5	6.6	7.7	8.8	9.9	11.0	12.1	13.2	14.3	15.4	16.5	17.6	18.7	19.8	20.9	22.0	23.1	24.2	26.4	30.9	35.3	44.1	52.9
1/4"	.250	5.9	7.4	8.8	10.3	11.8	13.2	14.7	16.2	17.7	19.1	20.6	22.1	23.6	25.0	26.5	28.0	29.5	30.9	32.4	35.3	41.2	47.1	58.9	70.7
5/16"	.312		9.2	11.0	12.9	14.7	16.5	18.4	20.2	22.1	24.0	25.7	27.6	29.4	31.3	33.0	34.9	36.8	38.6	40.4	44.1	51.5	58.8	73.5	88.2
5/8"	.375			13.3	15.5	17.7	19.9	22.1	24.3	26.5	28.7	31.0	33.1	35.3	37.6	39.7	42.0	44.2	46.3	48.6	53.0	61.9	70.7	88.4	106
1/2"	.500					23.6	26.5	29.4	32.4	35.3	38.3	41.2	44.2	47.1	50.0	52.9	55.9	58.9	61.8	64.8	70.6	82.5	94.3	118	141
5/8"	.625							37.0	40.5	44.2	48.0	51.5	55.2	59.0	62.6	66.2	69.9	73.7	77.2	81.0	88.3	103	118	147	177
3/4"	.750									53.0	57.4	62.0	66.3	70.7	75.0	79.4	83.9	88.4	92.7	97.2	106	124	141	177	212
7/8"	.875											72.2	77.3	82.5	87.7	92.7	97.9	103	108	113	124	144	165	206	247
1"	1.000													94.3	100	106	112	118	124	130	141	165	189	236	283
1 1/8"	1.125															119	126	133	139	146	159	186	212	265	318

PRESS SAFETY

— It is the user's responsibility that the machine and tooling be set up and used in accordance with local and national OSHA Laws and ANSI B11.5 standards for safety.
— Correct alignment of punch and die must be maintained.
— Correct placement of stripper must be maintained to prevent tilting of the work piece.
— Coupling nuts and die holders must be properly tightened to hold tooling securely.
— Extreme pressures are generated in all metal punching operations, use all recommended safety precautions.
— Clearance between the punch and die should be 10 — 15% of material thickness.
— The thickness of material should never exceed the punch diameter being used.

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