Wabash, Indiana

CARVER LABORATORY EQUIPMENT

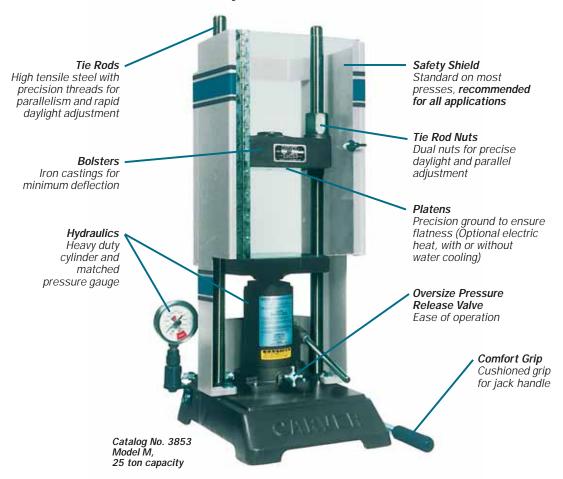
Laboratory Presses and Accessories





The world's most popular

All Carver Laboratory Presses Provide These Benefits



The international standard For more than 85 years Carver hydraulic presses have been the standard for laboratories around the world. Carver Model C presses alone are in use in more laboratories than any other press. The current Carver line has been expanded and improved with more sizes, options, features, and quality performance than any other line of presses.

The widest choices Standard choices now include two-column and four-column, benchtop and floor standing, and manual and automatic presses with clamping capacities from 12 to 100 tons. Automatic "Auto Series" presses include user-friendly microprocessor based controls and integral safety enclosures. Accessories include new self-contained, electrically operated AutoPak hydraulic power unit for retrofit to existing manual Carver presses.

Applications

- Materials research: ceramics, composites, construction materials, cosmetics, drugs, pharmaceuticals, powder metals, printed circuit boards, rubber, silicone and other elastomers, soil, thermoplastic resins and thermosets
- Quality and performance testing of physical properties: compression strength, flexural strength, shear strength, flow and color dispersion.
- Laboratory testing: ASTM test plaque or bar molds for polyethylene and polypropylene.
- Laminating: credit cards, ID cards, plaques and printed circuit boards
- Other applications: composite molding, compression molding, crushing, encapsulation, extrusion, forming, insert pressing, producing KBr pellets for infrared spectroscopy, metal forming (dimpling), insert molding, oil extraction, pel-

letizing, specimen preparation, splice molding, splitting chilled oils, transfer molding, and vulcanizing rubber stamps.

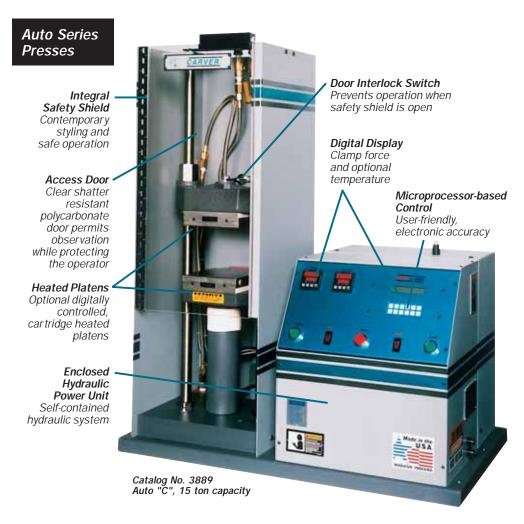
Specialized applications Special presses dedicated to specific applications include ASTM test plaque or bar molding, pellet making (KBr specimens for infrared and x-ray spectroscopy), laminating and rubber stamp molding.

Custom presses, too In addition to the models shown in this catalog, Carver designs and manufactures a wide variety of custom made presses and accessories to suit your specific application. Please consult the factory for any equipment not specifically listed in this catalog.

Contact us at: Carver, Inc. 1569 Morris St., P.O. Box 544 Wabash, IN 46992-0544

Phone: 260-563-7577, Fax: 260-563-7625 E-mail: carverpress@corpemail.com Internet: www.carverpress.com

laboratory presses with more choices, more features, more performance



How to select the right Carver press for your application:

1.	Determine if you want a general
	laboratory press or one dedicated
	to a special application.

General pages 4,5,6,7,8 **Special** pages 9,10,11

2. Determine clamp pressure and choose benchtop or floor standing model.

Benchtop

12 to 30 tons pages 4,5,7, 8,9,10,11

Floor Standing

30 to 100 tons page 6

Unheated Floor Models page 6 Benchtop pages 5,8

- Refer to specification tables for appropriate work area (platen size) and daylight opening (working height between platens).
- **5.** Refer to photos and descriptions to select two- or four-column configuration.
- **6.** Select control level desired and platen options on page 12.
- Refer to pages 12 thru 15 to select appropriate accessories for your application.
- **8.** Note the catalog numbers of your selections on your letterhead and fax to 260-563-7625, or call 260-563-7577 for prompt assistance.

Inside
Carver presses/ Applications overview 2
Press selection3
Table of contents 3
Auto Series benchtop presses, 15 to 30 tons 4
Monarch floor standing presses, 30 to 100 tons
Heated platen benchtop presses, 12 to 30 tons 7
Standard benchtop presses, 12 to 30 tons 8
Pellet presses and accessories 4, 9, 11
Special application presses10
ASTM test plaque or bar molding presses ASTM molds
Carver portable chillers10
Rubber stamp and laminating presses11
Heating and cooling platens12
Molds, dies and accessories13
Accessories catalog listings 14
AutoPak™ power unit for existing presses16
Custom presses 16
Wabash hydraulic presses and molding machines 16

Cover photo: Carver presses molding medical components.



Automatic hydraulic laboratory presses in two- and four-post models up to 30 ton clamp capacity



Carver's Auto Series presses bring a world of power and control options to your lab



Catalog No. 3887 AutoPellet, 25 ton capacity AutoPellet press specifically designed for preparation of pellets, primarily KBr specimens for IR Spectroscopy (See Pellet Presses on page 9). *

Carver has incorporated more than 85 years of experience in laboratory presses into this line of automatic electrically powered benchtop presses for today's labs. Each has a built-in hydraulic system with a microprocessor control for accurate programmable operation. Five models are available ranging in clamp force capacity from 15 to 30 tons, including a pelletizing press and two- or four-column models. All have integral safety enclosures with a clear front door for operator safety and observation.



Carver Auto "C" presses molding medical components. *

*AutoPak power unit available for existing presses. (See page 16)

benchtop presses, 15 to 30 ton capacity

A complete line of automatic electrically powered benchtop presses for the laboratory or manufacturing facility



Individual Digital Temperature Controllers Ensure accurate temperature for each platen (optional)

Dual "Close" ButtonsRequire two-hand
operation for operator
protection



Digital DisplayOf operating parameters

Microprocessor Control Keypad For entry of operating parameters

Power SwitchesWith indicator lights

"Open" Button Single button opens press

Digital ("D") Control Description:

The Digital ("D") control system controls the desired pressure, speed and dwell time, and displays the press status. The following features are included with the Digital ("D") version:

- Ten (10) recipe storage of pressure and time settings
- Digital control of pressure and dwell time
- · Digital pressing speed adjustment
- Adjustable end of cycle alarm
- Auto opening of platens upon cycle completion
- Units of measure setting for KG, lbs or US tons
- · Optional manual cooling

The normal operating cycle consists of closing the press with the dual "antitie-down" buttons and building force to the selected setpoint, maintaining this setpoint for a predetermined dwell time, and eventually opening the press after the integral timer has expired.

Programmable ("P") Control Description:

The Programmable ("P") control system includes all the features of the "D" control system plus allows for step programming of segments, or events, throughout the cycle. The following additional features are included:

 Twenty (20) programmable segments per recipe

- Ten (10) recipe storage of <u>temperature</u>, pressure and time settings
- Optional automatic water cooling and air purge

The normal operating cycle consists of closing the press with the dual "antitie-down" buttons and building force to the selected setpoint of the first segment of the recipe, maintaining this setpoint for the dwell time specified for that segment, repeating this cycle of building or maintaining force for the other segments, and eventually opening the press.

Platen temperature can also be adjusted for each segment of the recipe as part of the "Programmable" control system.

Model	Catalog Number	Max. Clamp Force, Tons (lb)	Heated Platens	Platen Size (in)	Ram Stroke (in)	Daylight Opening (in)	Footprint W x D (in)	Height (in)	Weight (lb)
AutoPellet	3887	25 (50,000)	N/A	5 dia.	1	1.50 to 7.25	32 x 20	22 (plus handle)	400
Two-Post Models									
Auto"C"	3888	15 (30,000)	No	6 x 6	6	.75 to 18	35 x 20	40	350
Auto"C"	3889	15 (30,000)	Yes	6 x 6	6	0 to 15	35 x 20	40	400
Auto"M"	3890	25 (50,000)	No	9 x 9	6	.75 to 16	37 x 20	43	540
Auto"M"	3891	25 (50,000)	Yes	9 x 9	6	0 to 12	37 x 20	43	600
Four-Post Models									
AutoFour/15	3892	15 (30,000)	No	12 x 12	6	1 to 18.5	42 x 24	46	800
AutoFour/15	3893	15 (30,000)	Yes	12 x 12	6	0 to 13.5	42 x 24	46	1,000
AutoFour/30	3894	30 (60,000)	No	12 x 12	6	1 to 17	42 x 24	46	850
AutoFour/30	3895	30 (60,000)	Yes	12 x 12	6	0 to 12	42 x 24	46	1,050

Monarch Hydraulic Lab Presses 30, 50, 75, 100 ton capacity

Carver's Monarch laboratory presses with integral hydraulic system and high technology options are based on standard production press models adapted to precision laboratory requirements.

Recommended for testing or research, compacting, molding rubber or plastic, laminating and assembly where stripping pressure is required.

Standard features include doubleacting J.I.C. style cylinder for power open and power close. An integral hydraulic reservoir is easily accessible for cleaning and includes a strainer or cartridge filter, air filter/breather, oil level indicator and oil cooler. A programmable controller with access module is standard.

Optional equipment includes electrically heated platens to 600°, 800° or 1200°F, with digital temperature controllers, low pressure system, pressing speed control and automatic platen cooling.

C € available

Stress-Proof
Tie Rods
Extra threads
for adjustment
of daylight
opening
Solid Steel
Bolsters
Minimize
deflection
Heated Platens
Flectric

Electric
cartridge
heaters with
individual digital
temperature
controllers

Guards Improved protection for operator and by-standers

Hydraulic System Self-contained, quiet operation

Unitized Base Rapid installation



Control Cabinet NEMA rated enclosure protects operator and components

Access Module Program press functions

Pressure Gauge 4" gauge displays operating force in tons

Powerful
Hydraulic
Cylinder
Double-acting
JIC design

Pressure Control Valve Adjust clamping pressure

Catalog Number	Maximum Capacity (tons)	Nominal Work Area (in)	Adjustable Daylight Opening*	Cylinder Stroke (in)	Tie Rod Dia. (in)	Floor Space W x D (in)	Height (in)	Approx. Weight (lb)
3710H	30	15 x 15	6 to 12	6	1.25	36 x 23	70	1,750
3710-ASTM*	30	12 x 12	6 to 12	6	1.25	36 x 23	70	1,750
3711H	50	12 x 12	8 to 16	8	1.75	57 x 36	78	4,200
3712H	50	15 x 15	8 to 16	8	1.75	57 x 36	78	4,200
3713H	50	18 x 18	8 to 16	8	1.75	57 x 36	78	4,500
3714H	50	24 x 18	8 to 16	8	1.75	63 x 36	78	5,000
3715H	75	15 x 15	8 to 16	8	2	57 x 36	78	4,300
3716H	75	18 x 18	8 to 16	8	2	57 x 36	78	4,600
3717H	75	24 x 18	8 to 16	8	2	63 x 36	78	5,100
3718H	100	15 x 15	12 to 22	12	3	61 x 36	78	6,200
3719H	100	18 x 18	12 to 22	12	3	61 x 36	78	6,200
3720H	100	24 x 18	12 to 22	12	3	63 x 36	78	6,450

^{*}Model "B" ASTM includes heated and cooling platens. (See page 10)

Heated presses with digital temperature controls and safety shields 12, 25 and 30 ton capacity

Used for molding, laminating, embossing, and bonding of various materials



No. 4386 No. 4120 No. 4122 No. 4126 No. 4128

TWELVE TON PRESSES

■ No. 4386

(Model CH) Twelve ton, manual, two-column hydraulic lab press with digital heated platens. Daylight to 15". Easy-to-read dual scale gauge is calibrated in pounds and metric tons.

■ No. 4120

(Model 12-10H) Twelve ton, manual, two-column hydraulic press. Similar to No. 4386 press, but heavier construction and guided moving platen. Has electrically heated 10"x 7" platens for temperatures to 650°F with digital controller for each platen. Easy-to-read dual scale gauge is calibrated in pounds and metric tons.

■ No. 4122

(Model 12-12H) Twelve ton, manual, four-column hydraulic press. Four-post construction assures parallelism over 12"x 12" surface. Easy-to-read dual scale gauge is calibrated in pounds and metric tons. Has electrically heated platens for temperatures to 650°F with digital controller for each platen.

■ No. 4123

(Model 12-12-2H) Same press as No. 4122 except has four electrically heated platens with two 3" daylights. Optional water cooled platens are also available.

TWENTY-FIVE TON PRESSES

■ No. 4389

(Model MH) Twenty-five ton, manual, twocolumn hydraulic press with digital heated platens. Daylight opening is adjustable. Rigid cast iron and steel construction for precision and durability. Easy-to-read gauge is calibrated in pounds and metric tons. Optional water cooled platens are also available.

■ No. 3856

(Model 25-12H) Twenty-five ton, manual, four-column hydraulic press. Easy-to-read gauge is calibrated in pounds and metric tons. Electrically heated 12"x 12" platens for temperatures to 650°F with digital controller for each platen, or special 8" x 8" high temperature platens to 1,100°F. Optional water cooled platens are also available.

■ No. 4126

(Model 25-12-2H) Same press as No. 3856 except has four electrically heated platens with two 3" daylights. Optional water cooled platens are available.

THIRTY TON PRESSES

■ No. 4128

(Model 30-12H) Thirty ton, manual, four-column, hydraulic press. Has two-speed pump, first stage for rapid closing and second for pressing mode. Full range gauge is calibrated in pounds and metric tons. Electrically heated platens for temperatures to 650°F with digital controller for each platen. Special 8" x 8" high temperature platens to 1,100°F are available. Specify °F or °C display and voltage requirements.

■ No. 4129

(Model 30-12-2H) Same press as No. 4128 except has four electrically heated platens with two 3" daylights. Optional water cooled platens are available.

C € available

Catalog Number	4386	4120	4122	4123	4389	3856	4126	4128	4129
Model	Model CH	12-10H	12-12H	12-12-2H	Model MH	25-12H	25-12-2H	30-12H	30-12-2H
Clamping Force									
U.S. Tons	12	12	12	12	25	25	25	30	30
Lbs	24,000	24,000	24,000	24,000	50,000	50,000	50,000	60,000	60,000
Max. Temperature (°F)	650°	650°	650°	650°	650°	650°	650°	650°	650°
Platens (in)	6 x 6	10 x 7	12 x 12	12 x 12	9 x 9	12 x 12	12 x 12	12 x 12	12 x 12
Ram Stroke (in)	5.1	5.1	5.1	5.1	6.5	6.5	6.5	6	6
Daylight Opening (in)	0 to 15	0 to 11	0 to 10	2@3	0 to 12	0 to 9.5	2@3	0 to 12	2@3
Footprint w x d (in)	15 x 16	26 x 18	29 x 27	29 x 27	19 x 24	29 x 27	29 x 27	32 x 27	32 x 27
Height (in)	39	39	39	39	42	39	43	43	43
Weight (lb)	300	420	770	1,035	425	805	1,070	835	1,100

Standard Presses 12, 25 and 30 ton capacity

For pelletizing, destructive testing, fluid extraction, pressure forming, etc.



TWELVE TON PRESSES

■ No. 3850

(Model Mini C) Twelve ton manual, two-column hydraulic press with 6" x 6" square platens. Compact and portable, requiring less bench space than our Model C. This press is ideal for constricted bench space or glove box applications, as well as field work. It features adjustable daylight, steel construction for rigid precision and includes safety shield for operator protection. Easy-to-read dual scale gauge is calibrated in pounds and metric tons.

■ No. 4350.L

Pellet press with 4" round platen. Same as No. 4350 without pellet die.

■ No. 3851

(Model C) Twelve ton, manual, two-column hydraulic lab press. Similar to Mini C above, but larger, heavier construction with daylight to 18". Easy-to-read dual scale gauge is calibrated in pounds and metric tons.

■ No. 3968

(Model 12-10) Twelve ton, manual, two-column hydraulic press. Similar to No. 3851 press described above, but heavier construction with fully guided moving platen and daylight to 16". Easy-to-read dual scale gauge is calibrated in pounds and metric tons.

■ No. 3969

(Model 12-12) Twelve ton, manual, four-column hydraulic press. Fully guided moving platen assures parallelism over 12"x 12" surface. Easy-to-read dual scale gauge is calibrated in pounds and metric tons.

TWENTY-FIVE TON PRESSES

■ No. 3853

(Model M) Twenty-five ton, manual, two-column hydraulic press. Daylight opening

is adjustable. Rigid cast iron and steel construction for precision and durability. Easy-to-read gauge is calibrated in pounds and metric tons.

■ No. 3855

(Model 25-12) Twenty-five ton, manual, four-column hydraulic press. Easy-to-read gauge is calibrated in pounds and metric tons

THIRTY TON PRESSES

■ No. 3970

(Model 30-12) Thirty ton, manual, four-column, hydraulic press. Has two-speed pump, first stage for rapid closing and second for pressing mode. Full range gauge is calibrated in pounds and metric tons.

Note: Carver presses can be automated with an optional AutoPak power package (See back cover).

C € available

Catalog Number with shield	3850	3989	4350.L	3851	3968	3969	3853	3855	3970
Model	Mini C	Mini C	_	Model C	12-10	12-12	Model M	25-12	30-12
Old Press*	3393	3392	_	2086	3724	2696	2089	2702	2698
Clamping Force Tons (lb)	12 (24,000)	12 (24,000)	12 (24,000)	12 (24,000)	12 (24,000)	12 (24,000)	25 (50,000)	25 (50,000)	30 (60,000)
Platens (in)	6 x 6	4 round	4 round	6 x 6	10 x 7	12 x 12	9 x 9	12 x 12	12 x 12
Ram Stroke (in)	5.1	5.1	5.1	5.1	5.1	5.1	6.5	6.5	6
Daylight Opening (in)	.75 to 7	.75 to 7	0 to 5.50	.75 to 18	1 to 16	1 to 15	.75 to 16	1 to 14	1 to 17
Footprint w x d (in)	12 x 16	12 x 16	10.25 x 8	15 x 16	17 x 18	21 x 28	19 x 24	21x 28	24 x 27
Height (in)	22	22	20.25	36	37	37	42	37	43
Weight (lb)	125	125	115	200	345	560	350	600	625

^{*}Use to refer to old models which are no longer available.

Presses for preparing pellets, bricks, briquettes and cakes





Special "all stainless steel" AutoPellet Press for corrosive operating environment.



■ No. 4350 Manual Pellet Press

The compact 12 ton Pellet Press with 4" diameter platen is perfectly suited for KBr pellet pressing. It can also be used for Glove Box applications, compound and formula testing, compression strength tests, fluid extractions and on-site field testing. Includes integral Safety Shield, buffer plate, 13mm evacuable die and counter-bored platen for positive die alignment.

■ No. 3887 AutoPellet Press

The self-contained 25 ton AutoPellet press has 5" diameter platen and integral safety shield cabinet enclosing electrically powered hydraulic system. Rigid slab side construction maintains precise alignment and includes provision for a vacuum line connection to the pellet die. "SD" microprocessor control system with digital display of force permits programmed operation and selectable bleed-off of pressure. Upgraded "PD" model allows programmed pressure bleed-off. 25 ton model includes 13mm KBr pellet die, and 40 ton model includes 31mm die for x-ray sample preparation. (Optional 40mm die available.)

Specifications

Catalog Number	Max. Clamp Force, U.S. Tons (lb)	Platen Size (in)	Die (mm)	Ram Stroke Stroke (in)	Daylight Opening (in)	Footprint W x D (in)	Height (in)	Weight (lb)
Manual 4350	12 (24,000)	4 dia.	13	5.1	0 to 5.50	10.25 x 8	20.25	115
AutoPellet 3887	25 (50,000)	5 dia.	13	1	1.5 to 7.25	31.5 x 22.75	22 (+ handle)	400
AutoPellet 4387	40 (80,000)	5 dia.	31*	1	1.5 to 7.25	34 x 22.75	26 (+ handle)	500

^{* 40} mm optimal



■ Evacuable Pellet
Dies Used with Pellet Presses to form
the pellets for use
in IR and x-ray
spectroscopy. The

stainless steel die includes a fitting for vacuum source connection. (13, 31 and 40mm dies available.)



■ No. 2090.1 Filters 12 filter pads for No. 2090 1.125" Test Cylinder

■ No. 2091.1 ads for No. 2091.2.25

Filters 12 filter pads for No. 2091 2.25" Test Cylinder



■ No. 3874 Vacuum Pump Kit Used with pellet press to evacuate molds or dies.



■ No. 2095 KBr Buffer Plate Required for use with 3619 KBr die. The 90mm diameter plate mounts to top

bolsters to prevent damage by the die plunger during pressing. The buffer plate can be used with other small dies.



■ No. 2090 1.125" I.D. Stainless Steel Test Cylinder and Pellet Mold ■ No. 2091

2.25" I.D. Nickel Plated Test Cylinder and Pellet Mold

■ No. 2091.2 2.25" I.D. Stainless Steel Test Cylinder and Pellet Mold For use with pellet presses for molding, forming bricks, briquettes, pressure forming, crushing, pressing plant and animal tissues, fluid extraction, extrusion and flow tests.



■ No. 2417 Heated 2.25" Test Cylinder ■ No. 2472 Heated 1.125" Test Cylinder Heated Test

Cylinder with adjustable thermostat to heat test cylinder up to 600°F. Specify voltage. Consult factory for special test cylinder sizes



No. 237005 Stainless Steel Pan Fluid pan for use with all Test Cylinder Outfits. When presses are used for fluid

extraction, filter papers sandwich the sample. The stainless steel pan captures the released fluid.

Presses for Special Applications



Plastics, elastomers and other materials

Carver has developed the following three presses which are specially configured to perform the compression molding of test plaque or bar specimens of Type I, II, III or IV polyethylene and other thermoplastic resins. The procedure is in conformance with ASTM Method D 1928, Procedure C. The



No. 4391-ASTM with Safety Shield

ASTM Chase Frame Assemblies

	С	atalog Number		100
Descrip- tion	Teflon Coated Steel	Stainless Steel	Brass	100 Mylar Sheets
4"x 4" Chase	4079	4080	4081	4161
6"x 6" Chase	4082	4083	4084	4162
8"x 8" Chase	4085	4086	4087	4163

presses are equipped with heating/cooling platens and a programmable digital controller which has a heating/cooling loop for each platen and built-in program for the required 15° /minute $\pm 2^{\circ}$ C cooling rate.

■ No. 3710-ASTM Model B, 30 tons

Floor standing, four-column, automatic press with heating/cooling platens and programmable controller.

■ No. 4391-ASTM Model 12-12H-ASTM, 12 tons

Benchtop, four-column manual press with heating/cooling platens and programmable controller.

■ No. 4393-ASTM (not pictured) Model AutoFour/15P-ASTM, 15 tons

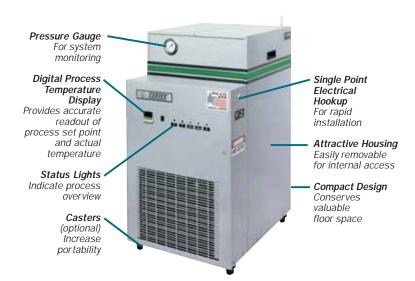
Carver Auto Series self-contained press with heating/cooling platens and programmable controller. See pages 4 and 5 for press description.

Carver "CAC" Recirculating Chillers

Three environmentally safe, high performance air-cooled chillers are perfect for laboratory and industrial cooling applications.

Applications:

- · Cooling condensers
- Extractors
- NMR magnets
- Furnaces
- · Electron microscopes
- Diffusion pumps
- FTIR spectroscopy rotary evaporators
- Laminators
- Molds



Model	Catalog Number		Capacity @ 65°F LWT (75°F Ambient)	Compressor @50°F LWT (90°F Ambient)	Com- pressor (hp)	Cooling Tank Capacity (gal)	Process Pump (hp)	Process Connect. (in NPT)	Current Draw		Weight (w/full tank) (lb)
CAC-50	3881	230/1/60	8,100 BTU	4,800 BTU	.5	6	1/3 1.2 GPM @ 35 PSIG	3/4	8A	20 x 26 x 34	265
CAC-100	3883	230/1/60	14,000 BTU	9,550 BTU	1	6	1/3 2.4 GPM @ 50 PSIG	3/4	10A	20 x 26 x 34	325
CAC-150	3885	230/1/60	25,400 BTU	16,000 BTU	1.5	6	1/3 3.6 GPM @ 27 PSIG	3/4	12A	20 x 26 x 34	345

AccuStamp® Rubber Stamp Presses



These rigid, four column manually operated hydraulic presses feature digital temperature controls for efficient rubber stamp molding with today's newest materials. Accurate temperature control to 500°F and precision parallel platens assure precise, repeatable pressure and temperature. Other platen sizes are available on request. Floor stand optional.

■ No. 3690, 7.5 ton Rubber Stamp Molding Press■ No. 3693, 25 ton Rubber Stamp Molding Press

AccuStamp 3690 shown with optional floor stand



AccuStamp 225

Available in several versions, each with electronic digital temperature control accurate to ±5°F or as narrow as ±2°F for temperatures to 500°F. These presses efficiently produce everything from the simplest rubber products to sophisticated pre-ink stamps. Long-life electrically heated platens are held parallel in a rigid steel frame. Each is designed for repeatable pressure and temperature to ensure quality production. Each is equipped with heavy-duty hydraulic unit. All models include pressure gauge and digital timer/alarm and digital temperature control(s).

Specifications—AccuStamp® Rubber Stamp Presses

Catalog Number	Rubber Sta	amp Only	Pre-Ink	Only	Rubber Stamp and Pre-Ink		
Catalog Number	3986	3996	3737	3690*	3987	3997	3693*
Model Number	212	225	300	3690	312	325	3693
Temperature Controllers	1	1	2	2	2	2	2
Temperature Uniformity, °F	±5	±5	±2	±2	±2	±2	±2
Digital Timer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pressure Gauge	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clamping Force, tons, pounds	12 24,000	25 50,000	12 24,000	7.5 15,000	12 24,000	25 50,000	25 50,000
Platen Size (in)	9 x 12	10 x 15	10 x 15	15 x 15	9 x 12	10 x 15	15 x 15
Maximum Daylight (in)	4	4	4	5	4	4	5
Dimensions (in)	21 x 10 x 28	22 x 10 x 30	21 x 10 x 28	28 x 19 x 27	21 x 10 x 28	22 x 10 x 30	28 x 19 x 30
Weight (lb)	225	350	225	810	225	350	1,100
Electrical Supply	115 or 2	30/1/60	115 or 230/1/60 115 or 230/1/60			0	

^{* 230/1/60} only

Laminating Presses

Manually operated hydraulic presses with stacked heating and cooling platens. Heating one opening while simultaneously cooling the other results in faster production of laminated ID cards, licenses, photos and other important documents. Temperature control to 500°F.

■ No. 4130 (formerly 2112) Laminating Press, 12 ton capacity with Safety Shield Four 6"x 6" platens for one hot and one cold daylight opening
 ■ No. 4131 (formerly 2114) Laminating Press, 25 ton capacity with Safety Shield Four 9"x 12" platens for one hot and one cold daylight opening
 ■ No. 4132 (formerly 2630) Laminating Press, 30 ton capacity with Safety Shield Four 12"x12" platens for one hot and one cold daylight opening.
 Digital control of heated platens in top opening.



Specifications—Laminating Presses

1 3			
Catalog Number	4130	4131	4132
Model Number	150-C	154-M	30-12-L
Clamping Force, U.S. tons (lb)	12 (24,000)	25 (50,000)	30 (60,000)
Platens (in)	6 x 6	9 x 12	12 x 12
Footprint w x d (in)	16 x 18	19 x 19	19 x 19
Height (in)	30	36	42
Weight (lb)	190	380	575
Electrical	11	15 or 230/1/50-60)



Punch and Die Holder

■ No. 818744C This punch and die holder permits off-line testing of pellet and tablet samples. It works with standard BB2 production tooling in most Carver presses, including Auto Series presses. The set includes an anodized aluminum holding fixture, steel shims to adjust for various size samples, and an anodized aluminum ejector.



Heating and Cooling Platen Options

Carver heat control options

There are several levels of control for heating and cooling to give you a choice to meet the specific demands of your application.

Manual thermostat control

Basic heated platens are controlled by an integral sensor and individual manual thermostats.

Digital control

For more precise control, individual digital temperature controllers automatically control platen temperature from a separate control panel.

■ No. 3984

Digital control assembly for existing hotplates.

Manual cooling

Manual water cooling permits hand operated cooling of platens with monitoring by analog thermometers.

Automatic cooling

Programmable controls permit automatic switching from heating to cooling and preset timed cycles. Consult factory with specific applications.

Note: All heaters are single phase unless otherwise noted.



Heated Platens Thermostat Control



Heated Platens with Digital Control and Disconnect (available with cooling channels)



Heating/Cooling Platens Thermostat Control



Cooling Platens

For Presses Catalog Number/Model	Platen Size (in)	Heated Platens Thermostat Control	Heated Platens Digital Control	Heating/Cooling Platens Thermostat Control	Heating/Cooling Platens Digital Control	Cooling Platens	
3393/Mini C 3850/Mini C 2086/Model C	6 x 6	2101 aluminum 150 to 500°F 2102.1 steel	3796 steel to 650°F (115V)	2103.1	3772 steel to 650°F with hoses (115V)	2104 aluminum, with valve and hose assemblies	
3851/Model C 2112/150-C 4130/150-C	6 X 6	150 to 500°F 2105 aluminum, cored for steam heat	4286 steel to 650°F (230V)	steel 150 to 500°F	3988 steel to 650°F with hoses (230V)		
2089/Model M 3853/Model M	9 x 9	2107.1 steel 150 to 500°F 2109 steel, cored for steam heat	3973 steel to 650°F (230V)	2108.1 steel 150 to 500°F	3972 steel to 650°F with hoses (230V)		
2114/ 154-M 4131 /154-M	9 x 12	2644 aluminum 150 to 500°F				2645 aluminum, with valve and hose assemblies	
All four-column	12 x 12		3906 steel to 650°F (230V)		3749 steel to 650°F with hose assemblies (230V)		
presses	8 x 8		3975 steel to 1,100°F (230V)		3976 steel to 1,100°F with hoses (230V)		

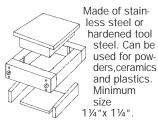
Laboratory Accessories for Carver Presses

Carver Molds and Dies See pages 9-10 for information on pellet molds and dies and ASTM specimen molds.

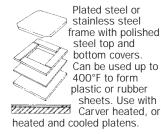
Stick Mold

Made of stainless steel or hardened tool steel. For ceramic, metal and other powder or granules. Stick molds are designed and built to specific customer requirements.

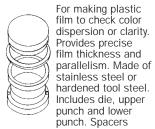
Picture Frame Mold



Tile Mold



Color Dispersion Disc Mold



available for optional film thicknesses.

Specifications

Catalog Number	Description	Dimensions	Sample Thicknesses	Material	Max. Clamping Force
818701D	Tile Mold	50mm x 50mm	1mm, 2mm, 5mm	440 Stainless Steel	N/A
818702D	Tile Mold	100mm x 100mm	m x 100mm		N/A
818703D	Tile Mold	150mm x 150mm	1mm, 2mm, 5mm	440 Stainless Steel	N/A
818704C	Color Dispersion	50mm diameter	0.1mm, 0.2mm, 0.5mm	440 Stainless Steel	N/A
818705C	Color Dispersion	100mm diameter	0.1mm, 0.2mm, 0.5mm	440 Stainless Steel	N/A
3619	Pellet Die	13mm	N/A	440 Stainless Steel	9 US Tons
3902	Pellet Die	31mm	N/A	440 Stainless Steel	30 US Tons
3876	Pellet Die	40mm	N/A	440 Stainless Steel	35 US Tons
2090	Test Cylinder	1.125	N/A	440 Stainless Steel	19 US Tons
2091	Test Cylinder	2.25	N/A	Nickel/Stainless Steel	26 US Tons
2091.2	Test Cylinder	2.25	N/A	Stainless Steel	51 US Tons
818697D	Picture Frame	12" x 12"	1mm, 2mm, 5mm	440 Stainless Steel	N/A
818698D	Tile Mold	4" x 4"	1mm, 2mm, 5mm	440 Stainless Steel	N/A
818699D	Tile Mold	6" x 6"	1mm, 2mm, 5mm	440 Stainless Steel	N/A
818700D	Tile Mold	10" x 10"	1mm, 2mm, 5mm	440 Stainless Steel	N/A



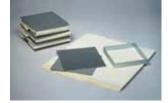
No. 2092 Swivel Bearing Plates

Carver presses are frequently used for crushing and breaking tests of standard 2"x 2" cubes and 2"x 4" cylinders of concrete samples or similar crushing tests. Swivel Bearing Plates adjust slightly to the sample to assure proper application of pressure. Requires safety shield.



■ No. 2094 Cage Equipment

When using Carver presses to press moisture from fibrous materials, extract fats, oils or juices from vegetable or animal tissues, splitting chilled oils or separating crystals from liquors, these accessories are useful. Cage equipment consists of cylinder, plunger, steel discs, felt discs, tray and bulb syringe. Requires a daylight opening of 16 inches.



No. 2093 Plate and Cloth Equipment

Plate and Cloth equipment for materials not easily held in Cage equipment. Consists of tray, forming frame, screens and soft cloths.



■ No. 2953 Pressure Cell Assembly, 50 ml (Model C or M only)

No. 3343 Pressure Cell As-

sembly, 100 ml (Model M only)

Stainless steel plunger, cylinder and baseplug. Includes disruption valve and seals for efficient pressure release.



No. 2096 Two Gauge Manifold

Permits mounting of both high and low range gauges for more precise application of pressure. Hand operated shut-off valve protects low pressure gauge when using high pressure. **Gauges sold separately.** (See page 15)



■ No. 3676 Digital Force Display

Laboratory Accessories for Carver Presses



Press Floor Stand

- No. 223171C **Press Floor Stand** 30" high enclosed floor stand for all 2 and 4 column presses except AccuStamp® Series.
- No. 223160C AccuStamp Floor Stand 30" high, open floor stand with work table.
- No. 223175C **Press Stand for Auto Series** 30" high enclosed floor stand.
- No. 223199C **Press Stand for Auto Series** 30" high with hinged rear doors.



Safety Shield

Attractive cabinet encloses pressing area to protect operator from objects which might fly from the compression area. Hinged front access door is clear, shatterproof polycarbonate. Recommended for use on all presses. Will accommodate heated platens.

- No. 3404 Safety Shield Mini C No. 3392, 3393
- No. 3295 Safety Shield Model C No. 2086

- No. 3253 Safety Shield Model M No. 2089
- No. 3322 Safety Shield Model 12-10 No. 3724
- No. 3418 Safety Shield Model 12-12 No. 2696, Model 25-12 No. 2702 and Model 30-12 No. 2698
- No. 4427 Safety Shield Model 3690, Model 3693



Repair parts for all Carver hydraulic units. Repair kits contain hydraulic oil, seals, gaskets, pins, fittings, valve parts and jack handle bracket for quick maintenance.

- No. 3729 12 ton hydraulic unit repair kit
- No. 3730 25 ton hydraulic unit repair kit

9"x 9" steam heating steel

cooling steel

Platens for two-column presses

(Specify °F or °C)

platens, digital

temperature con-

trollers, to 650°F,

9"x 12" heating

aluminum platens, 150° to 500°F 9"x 12" cooling

aluminum platens

12"x 12" heating

digital temperature

12"x 12" heating

& cooling steel

steel platens,

controllers, to 650°F, 230V

with valve and hose assemblies

230V, platens for two-column presses

platens with hoses

9"x 9" heating &

ACCESSORIES

Catalog number cross reference index

HEATING/COOLING

Platens for Model C Presses (Specify °F or °C)

2101 6"x 6" heating aluminum platen, 150° to 500°F

6"x 6" heating 2102.1 steel platens, 150° to 500°F

3796 6"x 6" heating steel platens, digital tempera-

ture controllers, to 650°F, 115V

6"x 6" heating 4286 steel platens, digital temperature controllers,

to 650°F, 230V 6"x 6" heating & 2103.1 cooling steel platens, 150° to 500°F with hoses

2104

6"x 6" cooling aluminum platens,

with valve and hose assemblies

6"x 6" heating & 3772 cooling steel platens, digital temperature controllers, to 650°F, 115V

3988 6"x 6" heating & cooling steel

platens, digital temperature controllers, to 650°F, 230V



2105 6"x 6" steam heat aluminum with insulation and hoses

Platens for Model M Presses (Specify °F or °C)

9"x 9" heating 2107.1 steel platens, 150° to 500°F

3973 9"x 9" heating steel platens. digital temperature controllers, to 650°F, 230V with mounting feet 9"x 9" heating & 2108.1 cooling steel

platens, 150° to

500°F with hoses

Platens for four-column presses (Specify °F or °C) 3906 3749 3975

3976

2109

3972

2644

2645

platens, digital temperature controllers, to 650°F, 230V 8"x 8" high temperature heating steel platens, to 1100°F, 230V 8"x 8" high temperature heating & cooling steel platens, to

1100°F, 230V

Carver reserves the right to change specifications without notice. Presses and accessories may differ from photos shown. Carver strongly recommends the use of a safety shield and safety glasses when operating Carver equipment.

MOLDS AND	D DIEC	818700D	10"x 10" tile	823005	Protoctive blotter	Two Cours	Manifold
MOLDS AND DIES (See page 13)		8187000	mold, 1mm, 2mm	823005	Protective blotter, 9"x 12"	Two Gauge 2096	Two gauge manifold
Test Cylinders and Pellet Molds		or 5mm thick, Stainless steel			eated Test Cylinders		Digital force display
2090	Test cylinder outfit, 1.125" I.D.	818701D	50mm x 50mm	2472	Heating jacket with 1.125" test cylinder	Dial Thermo	ometers
2090.1	Set of 12 filter pads for 2090		tile mold, 1mm, 2mm or 5mm thick, Stainless steel	2417	Heating jacket with 2.25" test cylinder		
2091	Test cylinder outfit, 2.25" I.D.	818702D	100mm x 100mm tile mold, 1mm,	SAFETY SI			
2091.1	Set of 12 filter pads for 2091		2mm or 5mm thick, Stainless steel	(See page 3404	For all Mini C		
237005	Stainless steel pan for either	818703D	150mm x 150mm tile mold, 1mm,	3295	Presses For all Model C	385001	Dial face thermometer
2091.2	Test cylinder outfit all stainless steel,	0407040	2mm or 5mm thick Stainless steel	3253	Presses For all Model M Presses	385002	150°F to 750°F Dial face
3619	2.25" I.D. 13mm pellet die	818704C	50mm diameter color dispersion disc, 1mm, 2mm	3322	For all presses with 10"x 7" platens		thermometer 50°C to 400°C
3902	for KBr pellets 31mm pellet die,		or 5mm thick, Stainless steel	3418	For all presses with 12"x 12" platens	HYDRAULIO (Specify pre	C UNITS ess Catalog Number)
3876	440 Stainless steel 40mm pellet die,	818705C	100mm diameter color dispersion	4427	For 3690 and 3693	3912	12 ton hydraulic unit
Anvils	440 Stainless steel		disc, 1mm, 2mm or 5mm thick, Stainless steel		with 15"x 15" platens	3437	12 ton hydraulic unit with gauge and
2092	Swivel bearing plate (Requires safety	818744C	Pharmaceutical pellet die holder	GAUGES/1 (See page	THERMOMETERS	3925	coupling assembly 25 ton hydraulic
2095	shield) KBr buffer plate		ROCESSING	(See page	13)	3438	unit 25 ton hydraulic
ASTM Molds		(See pages 9 and 13) Pressure Cell Assemblies		(*)		unit with gauge and coupling assembly
(See page 1	4"x 4" chase	2953	Pressure cell, 50 ml		9.	321007	Pump and reservoir for 30
4074	assembly, Teflon	3343	Pressure cell, 100 ml	Gauges for	Model C		ton presses
4080	4"x 4" chase assembly,	Plate and C	(Model M only)	381005	Gauge normally fur- nished with Model C,	3467	Hydraulic cylinder for 30 ton presses
4001	Stainless steel	2093	Plate and cloth,		0 - 24,000 lb	3729	12 ton repair kit
4081	4"x 4" chase assembly, Brass	2073	tray, forming frame and rolled screens		applied force, 11,000 kg, 200 lb	3730 2170	25 ton repair kit Carver hydraulic fluid
4082	6"x 6" chase assembly, Teflon	Cage Equip		381042	increments Model C gauge,	ΔΙΙΤΟΡΔΚ Ρ	POWER UNITS
4083	6"x 6" chase	2094	Cage equipment	301042	0 - 500 lb, 250 kg,	(See page 1	16)
	assembly, Stainless steel		including felt discs, steel discs, tray,	381001	5 lb increments Model C gauge,	3946D	AutoPak/12, for 12 ton presses,
4084	6"x 6" chase assembly, Brass		bulb type syringe and mounting hard-		0 - 1,000 lb, 450 kg, 10 lb increments	3947D	digital control AutoPak/25,
4085	8"x 8" chase assembly, Teflon		ware. Minimum daylight opening of 16" required.	381002	Model C gauge, 0 - 2,000 lb, 900 kg,	00405	for 25 ton presses, digital control
4086	8"x 8" chase assembly,	Polished Ch	rome Plates	381003	20 lb increments Model C gauge,	3948D	AutoPak/30, for 30 ton presses,
4087	Stainless steel 8"x 8" chase	and Blotter (For laminat	s ing applications)		0 - 5,000 lb, 2,250 kg, 50 lb	FLOOR STA	digital control
4161	assembly, Brass (100) 6"x 6"	235020	Plate with 2-3 micro-inch finish,		for high and low pressure readings	(See page 1	14)
	mylar sheets for 4"x 4" molds		1 side polished, 6"x 6" x .031" thick	381004	Model C gauge, 0 -10,000 lb	223160C	Press stand for AccuStamp® presses, 30" high
4162	(100) 8"x 8" mylar sheets for	235021	Plate with 2-3 micro-inch finish,		4,500 kg, 100 lb increments	223171C	Press stand for 2 column and
4163	6"x6" molds (100)		1 side polished, 9"x 9" x .031" thick	Gauges for			4 column presses
4103	10"x 10" mylar	235022	Plate with 2-3	381008	Gauge normally fur- nished with Model M,	223175C	Press stand for Auto Series
040/075	sheets for 8"x 8" molds		micro-inch finish, 1 side polished, 9"x 12"x .031" thick		0 - 50,000 lb applied force,	223199C	30" high Press stand
818697D	12"x 12" picture frame mold,	235023	Plate with 2-3		22,500 kg, 500 lb increments	2201770	for Auto Series with hinged
	1mm, 2mm or 5mm thick,		micro-inch finish, 1 side polished,	381006	Model M Gauge, 0 - 5,000 lb,		rear doors
040/005	Stainless steel		12"x 12" x .031" thick		2,250 kg, 50 lb		
818698D	4"x 4" tile mold, 1mm, 2mm or	823003	Protective blotter,	381007	increments Model M Gauge,		
	5mm thick, Stainless steel	823012	6"x 6" Protective blotter,	33.337	0 - 10,000 lb,		
818699D	6"x 6" tile mold,		9"x 9"		4,500 kg, 100 lb increments		

Consult factory for other accessories not listed here

6"x 6" tile mold, 1mm, 2mm or 5mm thick,

Stainless steel

Add power to existing presses

AutoPak™ Power Units

A self-contained, electrically operated automatic power unit is available for retrofit to existing manual presses. Its compact benchtop design is just 23"x 20"x 24".

It is equipped with a microprocessor control system and features a 1/4 hp DC motor, two-stage hydraulic pump, externally adjustable pressure control, pressure gauge and automatic cycle control. Two-hand "anti-tiedown" controls protect

the operator. Shown with optional digital platen temperature controllers. Consult factory for heated press applications.



Catalog No.	Model	Capacity (tons)	Control	
3946D	AutoPak/12	12	Digital	
3947D	AutoPak/25	25	Digital	
3948D	AutoPak/30	30	Digital	

Specify 115/1/60 or 230/1/60 and press model to be used with.

Custom Presses

Customized presses can be configured from the many options and accessories listed in this catalog. In addition, Carver engineers will work with you to design special presses for your particular application. Consult the factory for more information. Press shown is a twenty ton four-column hydraulic press used in research and development applications.



Carver Warranty

Carver Inc. warrants all equipment we manufacture to be free from defects in workmanship and material when used under recommended conditions. The Company's obligation under this warranty is limited to those parts which within twelve (12) months from delivery of equipment to original purchaser are returned to the factory with transportation prepaid, and upon examination shall disclose them to be defective. Carver neither assumes, nor authorizes any other persons to assume any liability in connection with the sale of its equipment except under the conditions of this warranty.

This warranty does not cover any labor charges for replacement of parts, adjustment, repair or any other work done. This warranty shall not apply to any apparatus which in our opinion has been subjected to misuse, negligence or pressures in excess of limits recommended, or which shall have been repaired or altered outside of the Carver factory.

Replacement of defective material(s) will be FOB the Carver factory. Replacement of component parts not of its manufacture will be limited to the warranty of the manufacturers of such parts.

Rely on Carver and Wabash presses for every need

Carver, Inc. and Wabash MPI are sister companies located in Wabash, Indiana. For over 55 years Wabash MPI has met the challenge of designing and manufacturing standard and special presses for industry worldwide. All Carver and Wabash presses are manufactured completely in the USA. Parts, service and support information are readily available. Ask to see installations of Carver or Wabash presses performing productively in your area. Consult us to discuss all of your molding requirements. Wabash manufactures 15 to 450 ton injection molding machines for elastomers and thermoplastics, Compression molding machines, C-Frame presses, Vacuum chamber molding and laminating presses, Die-cut and Trim presses. For more information on any of our presses write, call or FAX us.





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