

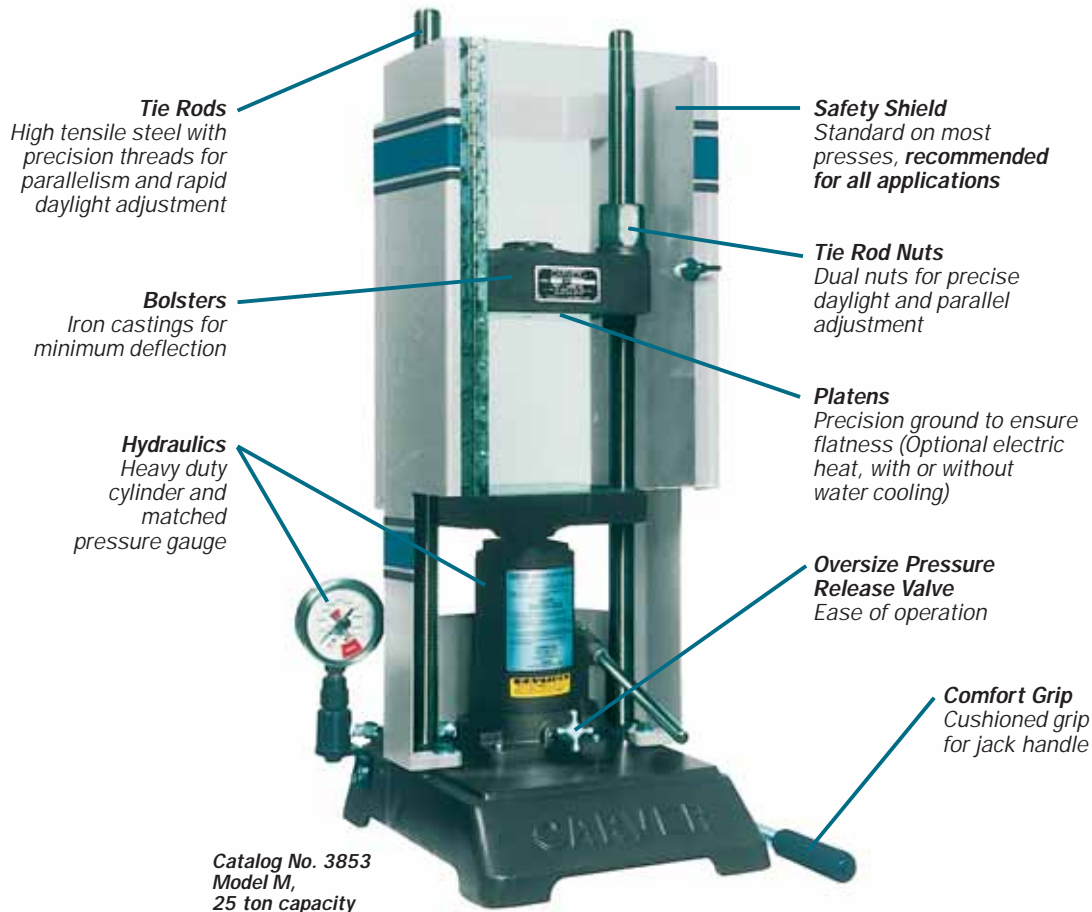
# CARVER<sup>®</sup>

# LABORATORY EQUIPMENT

## Laboratory Presses and Accessories



## 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.

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Internet: www.carverpress.com

# laboratory presses with more choices, more features, more performance

## Auto Series Presses

**Integral Safety Shield**  
Contemporary styling and safe operation

**Access Door**  
Clear shatter resistant polycarbonate door permits observation while protecting the operator

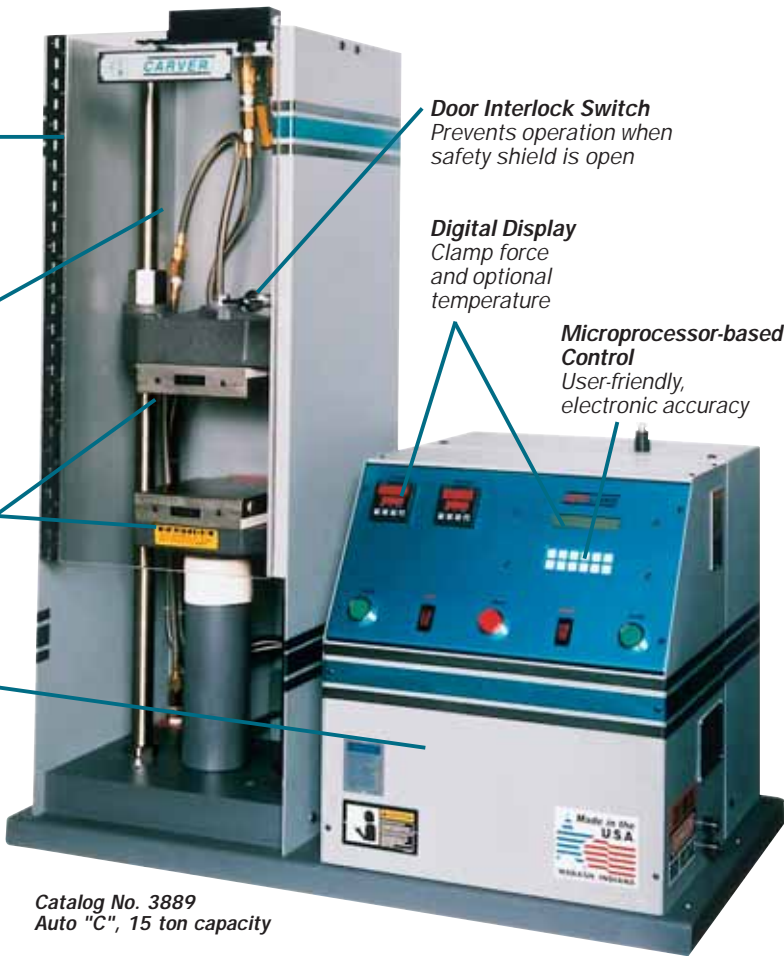
**Heated Platens**  
Optional digitally controlled, cartridge heated platens

**Enclosed Hydraulic Power Unit**  
Self-contained hydraulic system

**Door Interlock Switch**  
Prevents operation when safety shield is open

**Digital Display**  
Clamp force and optional temperature

**Microprocessor-based Control**  
User-friendly, electronic accuracy



Catalog No. 3889  
Auto "C", 15 ton capacity

### 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
3. Decide if heated platens will be needed.
  - Heated Floor Models** ..... page 6
  - Benchtop** ..... pages 5,7
  - Unheated Floor Models** ..... page 6
  - Benchtop** ..... pages 5,8
4. 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.
7. 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

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Cover photo: Carver presses molding medical components.

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.

### 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)

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# benchtop presses, 15 to 30 ton capacity

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

**Auto Series control panel with optional digital platen temperature control**

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

**Dual "Close" Buttons**  
Require two-hand operation for operator protection



**Digital Display**  
Of operating parameters

**Microprocessor Control Keypad**  
For entry of operating parameters

**Power Switches**  
With 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 "anti-tie-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 tempera-  
ture, pressure and time settings
- Optional automatic water cooling and air purge

The normal operating cycle consists of closing the press with the dual "anti-tie-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.

## Specifications

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
<b>Two-Post Models</b>									
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
<b>Four-Post Models</b>									
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

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.

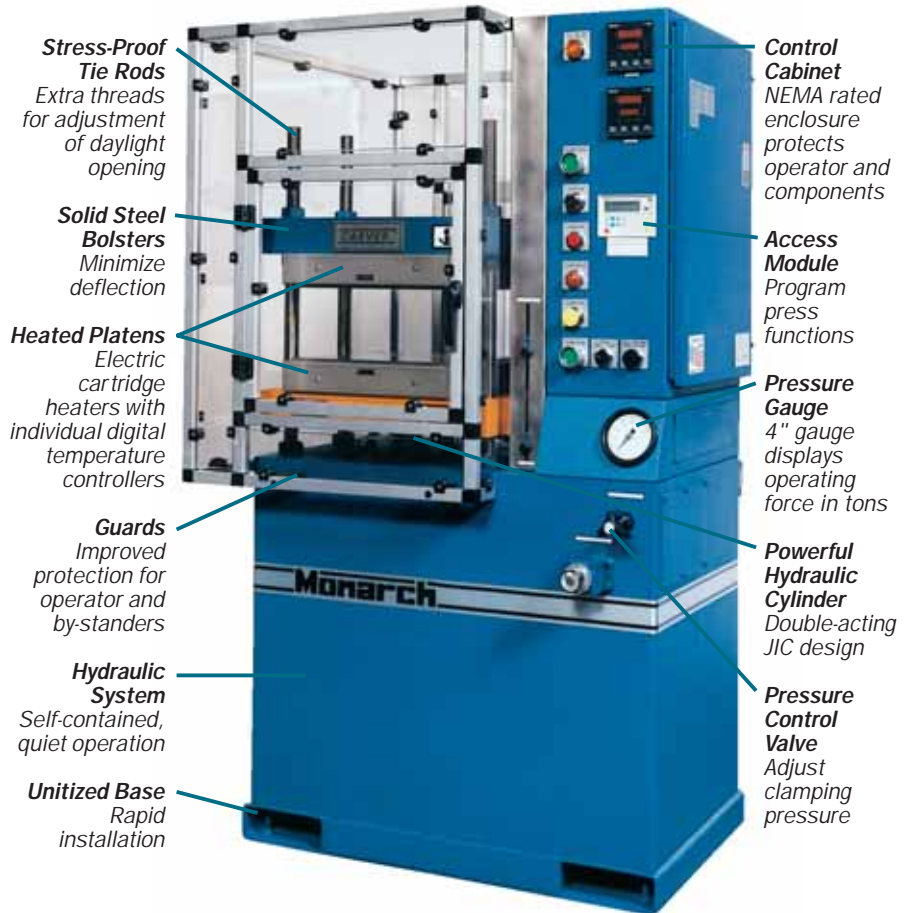
Carver's Monarch laboratory presses with integral hydraulic system and high technology options are based on standard production press models adapted to precision laboratory requirements.

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

Standard features include double-acting 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.

**CE** available



## Specifications

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)

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" daylight. Optional water cooled platens are also available.

### TWENTY-FIVE TON PRESSES

#### ■ No. 4389

(Model MH) Twenty-five ton, manual, two-column 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" daylight. 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" daylight. Optional water cooled platens are available.

**CE** available

## Specifications

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

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



No. 3850

No. 4350.L

No. 3851

No. 3968

No. 3853

No. 3855

### 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 day-

light 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).*

☎ available

## Specifications

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	21 x 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.

# CARVER®

Presses for preparing pellets, bricks, briquettes and cakes



No. 4350  
12 ton  
Manual  
Pellet  
Press



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



No. 3887 25 ton  
AutoPellet Press

## ❑ 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 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.



Model "B"  
3710-ASTM



No. 4391-ASTM  
with Safety Shield

### ASTM Chase Frame Assemblies

Description	Catalog Number			100 Mylar Sheets
	Teflon Coated Steel	Stainless Steel	Brass	
4"x 4" Chase	4079	4080	4081	4161
6"x 6" Chase	4082	4083	4084	4162
8"x 8" Chase	4085	4086	4087	4163

### Molding ASTM Test Specimens

#### 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

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 ±2°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

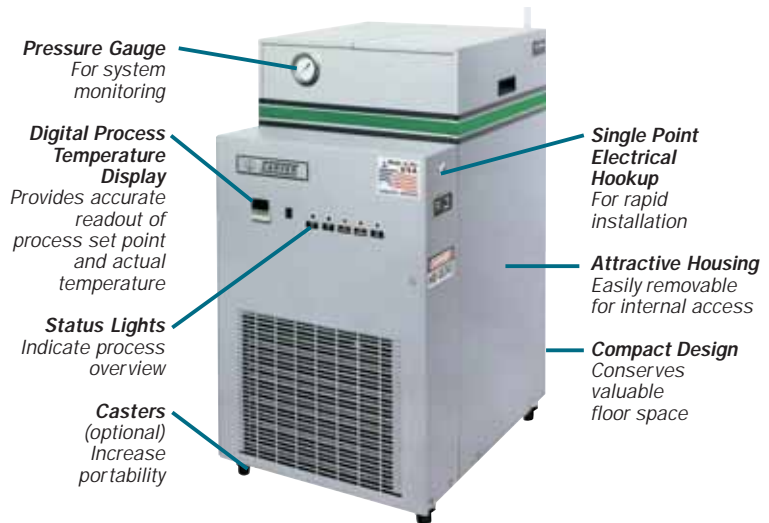
Carver Auto Series self-contained press with heating/cooling platens and programmable controller. See pages 4 and 5 for press description.

### 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



### Specifications

Model	Catalog Number	Electrical Supply	Capacity @ 65°F LWT (75°F Ambient)	Compressor @50°F LWT (90°F Ambient)	Compressor (hp)	Cooling Tank Capacity (gal)	Process Pump (hp)	Process Connect. (in NPT)	Current Draw	Overall Dim. w x d x h (in)	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  $\pm 5^\circ\text{F}$  or as narrow as  $\pm 2^\circ\text{F}$  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 Stamp Only		Pre-Ink Only		Rubber Stamp and Pre-Ink		
	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	$\pm 5$	$\pm 5$	$\pm 2$	$\pm 2$	$\pm 2$	$\pm 2$	$\pm 2$
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 230/1/60		115 or 230/1/60		115 or 230/1/60		

\* 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" x 12" platens for one hot and one cold daylight opening. Digital control of heated platens in top opening.



### Specifications—Laminating Presses

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	115 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.

*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.*

### 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.

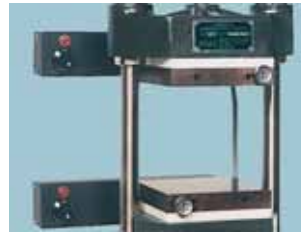
#### Manual cooling

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 (avail-  
able with cooling channels)



Heating/Cooling Platens  
Thermostat Control



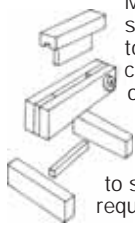
Cooling Platens

### Specifications

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 3851/Model C 2112/150-C 4130/150-C	6 x 6	2101 aluminum 150 to 500°F	3796 steel to 650°F (115V)	2103.1 steel 150 to 500°F	3772 steel to 650°F with hoses (115V)	2104 aluminum, with valve and hose assemblies
		2102.1 steel 150 to 500°F				
		2105 aluminum, cored for steam heat				
2089/Model M 3853/Model M	9 x 9	2107.1 steel 150 to 500°F	3973 steel to 650°F (230V)	2108.1 steel 150 to 500°F	3972 steel to 650°F with hoses (230V)	
		2109 steel, cored for steam heat				
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 presses	12 x 12		3906 steel to 650°F (230V)		3749 steel to 650°F with hose assemblies (230V)	
	8 x 8		3975 steel to 1,100°F (230V)		3976 steel to 1,100°F with hoses (230V)	

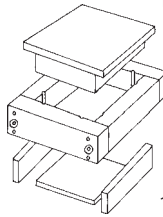
**Carver Molds and Dies** See pages 9-10 for information on pellet molds and dies and ASTM specimen molds.

### Stick Mold



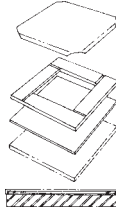
Made of stainless steel or hardened tool steel. For ceramic, metal and other powder or granules. Stick molds are designed and built to specific customer requirements.

### Picture Frame Mold



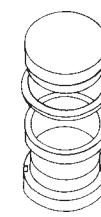
Made of stainless steel or hardened tool steel. Can be used for powders, ceramics and plastics. Minimum size 1¼" x 1¼".

### Tile Mold



Plated steel or stainless steel frame with polished steel top and bottom covers. Can be used up to 400°F to form plastic or rubber sheets. Use with Carver heated, or heated and cooled platens.

### Color Dispersion Disc Mold



For making plastic film to check color dispersion or clarity. Provides precise film thickness and parallelism. Made of stainless steel or hardened tool steel. Includes die, upper punch and lower punch. Spacers 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	1mm, 2mm, 5mm	440 Stainless Steel	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



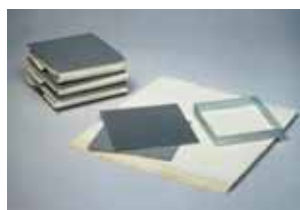
■ No. 2092 Swivel Bearing Plates

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 Assembly, 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



**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**

## 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
- 2102.1** 6"x 6" heating steel platens, 150° to 500°F
- 3796** 6"x 6" heating steel platens, digital temperature controllers, to 650°F, 115V
- 4286** 6"x 6" heating steel platens, digital temperature controllers, to 650°F, 230V
- 2103.1** 6"x 6" heating & cooling steel platens, 150° to 500°F with hoses
- 2104** 6"x 6" cooling aluminum platens, with valve and hose assemblies
- 3772** 6"x 6" heating & 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)

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

- 3973** 9"x 9" heating steel platens, digital temperature controllers, to 650°F, 230V with mounting feet
- 2108.1** 9"x 9" heating & cooling steel platens, 150° to 500°F with hoses

- 2109** 9"x 9" steam heating steel platens with hoses
- 3972** 9"x 9" heating & cooling steel platens, digital temperature controllers, to 650°F, 230V, platens for two-column presses

**Platens for two-column presses**  
(Specify °F or °C)

- 2644** 9"x 12" heating aluminum platens, 150° to 500°F
- 2645** 9"x 12" cooling aluminum platens with valve and hose assemblies

**Platens for four-column presses**  
(Specify °F or °C)

- 3906** 12"x 12" heating steel platens, digital temperature controllers, to 650°F, 230V
- 3749** 12"x 12" heating & cooling steel platens, digital temperature controllers, to 650°F, 230V
- 3975** 8"x 8" high temperature heating steel platens, to 1100°F, 230V
- 3976** 8"x 8" high temperature heating & cooling steel platens, to 1100°F, 230V

## MOLDS AND DIES

(See page 13)

### Test Cylinders and Pellet Molds

- 2090** Test cylinder outfit, 1.125" I.D.
- 2090.1** Set of 12 filter pads for 2090
- 2091** Test cylinder outfit, 2.25" I.D.
- 2091.1** Set of 12 filter pads for 2091
- 237005** Stainless steel pan for either
- 2091.2** Test cylinder outfit all stainless steel, 2.25" I.D.
- 3619** 13mm pellet die for KBr pellets
- 3902** 31mm pellet die, 440 Stainless steel
- 3876** 40mm pellet die, 440 Stainless steel

### Anvils

- 2092** Swivel bearing plate (Requires safety shield)
- 2095** KBr buffer plate

### ASTM Molds

(See page 10)

- 4074** 4"x 4" chase assembly, Teflon
- 4080** 4"x 4" chase assembly, Stainless steel
- 4081** 4"x 4" chase assembly, Brass
- 4082** 6"x 6" chase assembly, Teflon
- 4083** 6"x 6" chase assembly, Stainless steel
- 4084** 6"x 6" chase assembly, Brass
- 4085** 8"x 8" chase assembly, Teflon
- 4086** 8"x 8" chase assembly, Stainless steel
- 4087** 8"x 8" chase assembly, Brass
- 4161** (100) 6"x 6" mylar sheets for 4"x 4" molds
- 4162** (100) 8"x 8" mylar sheets for 6"x 6" molds
- 4163** (100) 10"x 10" mylar sheets for 8"x 8" molds
- 818697D** 12"x 12" picture frame mold, 1mm, 2mm or 5mm thick, Stainless steel
- 818698D** 4"x 4" tile mold, 1mm, 2mm or 5mm thick, Stainless steel
- 818699D** 6"x 6" tile mold, 1mm, 2mm or 5mm thick, Stainless steel

- 818700D** 10"x 10" tile mold, 1mm, 2mm or 5mm thick, Stainless steel
- 818701D** 50mm x 50mm tile mold, 1mm, 2mm or 5mm thick, Stainless steel
- 818702D** 100mm x 100mm tile mold, 1mm, 2mm or 5mm thick, Stainless steel
- 818703D** 150mm x 150mm tile mold, 1mm, 2mm or 5mm thick, Stainless steel
- 818704C** 50mm diameter color dispersion disc, 1mm, 2mm or 5mm thick, Stainless steel
- 818705C** 100mm diameter color dispersion disc, 1mm, 2mm or 5mm thick, Stainless steel
- 818744C** Pharmaceutical pellet die holder

### TESTING/PROCESSING

(See pages 9 and 13)

#### Pressure Cell Assemblies

- 2953** Pressure cell, 50 ml
- 3343** Pressure cell, 100 ml (Model M only)

#### Plate and Cloth Equipment

- 2093** Plate and cloth, tray, forming frame and rolled screens

#### Cage Equipment

- 2094** Cage equipment including felt discs, steel discs, tray, bulb type syringe and mounting hardware. Minimum daylight opening of 16" required.

#### Polished Chrome Plates and Blotters

(For laminating applications)

- 235020** Plate with 2-3 micro-inch finish, 1 side polished, 6"x 6" x .031" thick
- 235021** Plate with 2-3 micro-inch finish, 1 side polished, 9"x 9" x .031" thick
- 235022** Plate with 2-3 micro-inch finish, 1 side polished, 9"x 12" x .031" thick
- 235023** Plate with 2-3 micro-inch finish, 1 side polished, 12"x 12" x .031" thick
- 823003** Protective blotter, 6"x 6"
- 823012** Protective blotter, 9"x 9"

- 823005** Protective blotter, 9"x 12"
- Heated Test Cylinders**
- 2472** Heating jacket with 1.125" test cylinder
- 2417** Heating jacket with 2.25" test cylinder

### SAFETY SHIELDS

(See page 14)

- 3404** For all Mini C Presses
- 3295** For all Model C Presses
- 3253** For all Model M Presses
- 3322** For all presses with 10"x 7" platens
- 3418** For all presses with 12"x 12" platens
- 4427** For 3690 and 3693 with 15"x 15" platens

### GAUGES/THERMOMETERS

(See page 13)



#### Gauges for Model C

- 381005** Gauge normally furnished with Model C, 0 - 24,000 lb applied force, 11,000 kg, 200 lb increments
- 381042** Model C gauge, 0 - 500 lb, 250 kg, 5 lb increments
- 381001** Model C gauge, 0 - 1,000 lb, 450 kg, 10 lb increments
- 381002** Model C gauge, 0 - 2,000 lb, 900 kg, 20 lb increments
- 381003** Model C gauge, 0 - 5,000 lb, 2,250 kg, 50 lb for high and low pressure readings
- 381004** Model C gauge, 0 - 10,000 lb, 4,500 kg, 100 lb increments

#### Gauges for Model M

- 381008** Gauge normally furnished with Model M, 0 - 50,000 lb applied force, 22,500 kg, 500 lb increments
- 381006** Model M Gauge, 0 - 5,000 lb, 2,250 kg, 50 lb increments
- 381007** Model M Gauge, 0 - 10,000 lb, 4,500 kg, 100 lb increments

### Two Gauge Manifold

- 2096** Two gauge manifold
- 3676** Digital force display

### Dial Thermometers



- 385001** Dial face thermometer 150°F to 750°F
- 385002** Dial face thermometer 50°C to 400°C

### HYDRAULIC UNITS

(Specify press Catalog Number)

- 3912** 12 ton hydraulic unit
- 3437** 12 ton hydraulic unit with gauge and coupling assembly
- 3925** 25 ton hydraulic unit
- 3438** 25 ton hydraulic unit with gauge and coupling assembly
- 321007** Pump and reservoir for 30 ton presses
- 3467** Hydraulic cylinder for 30 ton presses
- 3729** 12 ton repair kit
- 3730** 25 ton repair kit
- 2170** Carver hydraulic fluid

### AUTOPAK POWER UNITS

(See page 16)

- 3946D** AutoPak/12, for 12 ton presses, digital control
- 3947D** AutoPak/25, for 25 ton presses, digital control
- 3948D** AutoPak/30, for 30 ton presses, digital control

### FLOOR STANDS

(See page 14)

- 223160C** Press stand for AccuStamp® presses, 30" high
- 223171C** Press stand for 2 column and 4 column presses
- 223175C** Press stand for Auto Series 30" high
- 223199C** Press stand for Auto Series with hinged rear doors

### 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-tie-down" controls protect the operator. Shown with optional digital platen temperature controllers. Consult factory for heated press applications.



### 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.



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.

### 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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