

Laboratory Presses and Accessories



Authorized distributor for Argentina



# The World's Most Popular Laboratory Presses

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Safety Shield Tie Rods Standard on High tensile steel all new presses, with precision recommended for threads for all applications parallelism and rapid daylight adjustment **Tie Rod Nuts** Dual nuts for precise daylight **Bolsters** and parallel Iron castings adjustment for minimum deflection Oversize Pressure Release Valve **Hydraulics** Ease of operation Heavy duty cylinder and matched pressure gauge **Extension Handle** For easy operation Carver **Standard Features** 

**The International Standard** For more than 100 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 or automatic presses with clamping capacities from 0.5 to 100 tons. Automatic "Auto Series" presses include a user-friendly control system and integral safety enclosures. Accessories include self-contained, electrically operated AutoPak hydraulic power units for 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

Catalog No. 3851-0 Model C, 12 ton capacity

- 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 & polypropylene
- Other applications: composite molding, compression molding, crushing, laminating, encapsulation, extrusion, forming, insert pressing, producing KBr pellets for infrared spectroscopy, metal forming (dimpling), insert molding, oil extraction, pelletizing, specimen preparation, splice

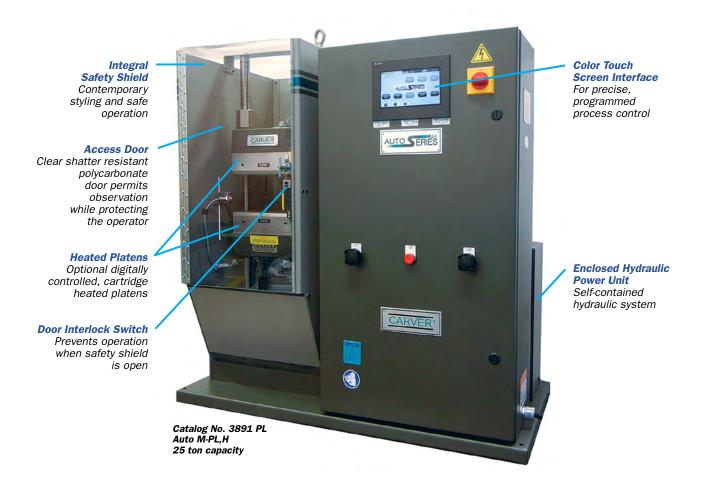
molding, splitting chilled oils, transfer molding, and vulcanizing

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

**Custom Presses** 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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ISO 9001:2015 Certified

# 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, 8, 9 **Special** ..... pages 7, 10, 11

**2.** Determine clamp force and choose benchtop or floor standing model.

#### Benchtop

7.5 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 ......pages 6, 11 Benchtop .....pages 5, 8

**Unheated** Floor Models ......page 6 Benchtop .....pages 5, 9

- **4.** Refer to specification tables for appropriate work area (platen size) and daylight opening (working height between platens).
- Refer to photos and descriptions to select two- or four-column configuration.
- **6.** Select heat 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 email to: carverpress@acscorporate.com Or, contact us for prompt assistance: Phone: 260-563-7577

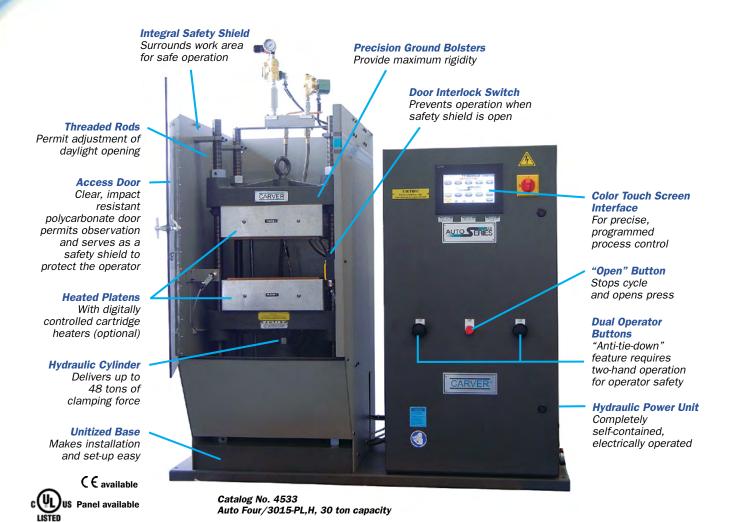
Fax: 260-563-7625



# Auto Series Compact Automatic Benchtop Presses

15 to 48 ton capacity

# Automatic hydraulic laboratory presses in two- and four-post models up to 48 ton clamp capacity



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

Carver has incorporated over 100 years experience in laboratory presses into their automatic electrically powered benchtop presses for today's labs. Each Auto Series Plus press has a built-in hydraulic system with a control system for accurate programmable operation. A variety of models are available ranging in clamp force capacity from 15 to 48 tons and work areas ranging from 6" x 6" to 18" x 18". Press models include two- or four-column, pelletizing, heated, unheated and cooled configurations. All presses have integral safety enclosures with a clear front door for operator safety and observation. AutoPak power units are available for existing manual presses (see page 16).



Many Carver Auto Series (and Manual presses) are available in CE configurations. Please contact Carver for pricing and availability.

# A Complete Line of Automatic Electrically Powered Benchtop Presses for the Laboratory or Manufacturing Facility

Carver, Inc. introduces their New Auto Series Plus Automatic Hydraulic Laboratory Presses. These new presses feature a 7" color operator interface, enhanced platen temperature control with auto-tuning, ramp heating capability, and real-time trending of force and temperature. Another enhancement includes storage of up to 250 recipes with recipe preview. Optional features include data logging for cycle parameters and a seven day timer for auto platen heat-up.

Auto Series Plus press models are available with 15 to 48 tons of clamping force and  $6" \times 6"$  to  $18" \times 18"$  platens. These benchtop presses are used in quality control, research and development for test sample preparations, destructive testing, molding, laminating and fluid extraction.

- Large 7" color touch screen operator interface
- Storage of up to 250 recipes
- Enhanced platen temperature control with auto-tuning
- · Ramp heating capability
- · Recipe preview
- · Real-time trending of force and temperature
- Seven day timer for auto platen heat-up (optional)
- Datalogging of cycle parameters (optional)
- Access to logged data through Wi-Fi (optional)
- 48 ton models include an integral wrap-around floor stand

#### **Auto Series "PL" Control Panel**



Model	Catalog	Max. Clamp	Heated	Platen	Ram	Daylight	Dimensions	Height	Weight
	Number	Force, Tons (lb)	Platens	Size (in)	Stroke (in)	Opening (in)	W x D (in)	(in)	(lb)
Auto C-PL	3888	15 (30,000)	No	6 x 6	6	0.75 to 16	42.50 x 24.00	45	625
Auto C-PL,H	3889	15 (30,000)	Yes	6 x 6	6	0 to 13	42.50 x 24.00	45	670
Auto M-PL	3890	25 (50,000)	No	9 x 9	6	0.75 to 16	42.50 x 24.00	45	625
Auto M-PL,H	3891	25 (50,000)	Yes	9 x 9	6	0 to 12	42.50 x 24.00	45	690
AutoFour/1512-PL AutoFour/1512-PL,H AutoFour/1515-PL AutoFour/1515-PL,H	3892 3893 4530 4531	15 (30,000) 15 (30,000) 15 (30,000) 15 (30,000)	No Yes No Yes	12 x 12 12 x 12 15 x 15 15 x 15	6 6 6	1 to 17 0 to 12 8 to 17 2 to 12	50.00 x 29.25 50.00 x 29.25 50.00 x 29.25 50.00 x 29.25	46 46 46 46	995 1,200 1,500 1,775
AutoFour/3012-PL AutoFour/3012-PL,H AutoFour/3015-PL AutoFour/3015-PL,H	3894 3895 4532 4533	30 (60,000) 30 (60,000) 30 (60,000) 30 (60,000)	No Yes No Yes	12 x 12 12 x 12 15 x 15 15 x 15	6 6 6	1 to 17 0 to 12 8 to 17 2 to 12	50.00 x 29.25 50.00 x 29.25 50.00 x 29.25 50.00 x 29.25	46 46 46 46	995 1,200 1,500 1,775
AutoFour/4815-PL	5400	48 (96,000)	No	15 x 15	4	6 to 19	55 x 36	72	3,074
AutoFour/4815-PL,H	5401	48 (96,000)	Yes	15 x 15	4	0 to 15	55 x 36	72	3,384
AutoFour/4818-PL	5402	48 (96,000)	No	18 x 18	4	6 to 19	55 x 36	72	3,074
AutoFour/4818-PL,H	5403	48 (96,000)	Yes	18 x 18	4	0 to 15	55 x 36	72	3,444



## 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 force is required.

Standard features include doubleacting JIC 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 500°, 650°, 800° or 1200°F, with digital temperature controllers, low pressure system, pressing speed control and automatic platen cooling.



installation

C € available

UL) US Panel available

Model	Maximum Capacity (tons)	Nominal Work Area (in)	Adjustable Daylight Opening	Cylinder Stroke (in)	Tie Rod Dia. (in)	Dimensions W x D (in)	Height (in)	Approx. Weight (lb)
CMG 30H-15	30	15 x 15	6 to 12	6	1.25	42 x 40	72	1,850
CMG 30H-12 ASTM	30	12 x 12	6 to 12	6	1.25	43 x 40	72	1,850
CMG 50H-12	50	12 x 12	8 to 16	8	1.75	60 x 48	78	4,800
CMG 50H-15	50	15 x 15	8 to 16	8	1.75	60 x 48	78	4,800
CMG 50H-18	50	18 x 18	8 to 16	8	1.75	60 x 48	78	5,000
CMG 50H-24	50	24 x 24	8 to 16	8	1.75	66 x 50	78	5,600
CMG 75H-15	75	15 x 15	8 to 16	8	2	63 x 52	78	5,300
CMG 75H-18	75	18 x 18	8 to 16	8	2	69 x 52	78	5,500
CMG 75H-24	75	24 x 24	8 to 16	8	2	69 x 54	78	6,100
CMG 100H-15	100	15 x 15	12 to 22	12	3	66 x 54	83	7,000
CMG 100H-18	100	18 x 18	12 to 22	12	3	66 x 54	83	7,200
CMG 100H-24	100	24 x 24	12 to 22	12	3	72 x 54	83	7,500

### **Presses for Special Applications**





with Safety Shield



No. 4393-ASTM & No. 4394-ASTM with Safety Shield

### Molding ASTM Test Specimens Plastics, elastomers and other materials

Carver has developed 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 4703, 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  $15\,^\circ/$ minute  $\pm 2\,^\circ$ C cooling rate.

#### CMG 30H-12 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.

♦ Optional Portable Chillers available upon request

### No. 4393-ASTM Model AutoFour/15P-ASTM, 15 tons & No. 4394-ASTM Model AutoFour/30P-ASTM, 30 tons

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

#### **ASTM Chase Frame Kits\***

	C	atalog Numb	er	400
Description (Sample Size)	Teflon Coated Steel	Stainless Steel	Brass	100 Mylar Sheets
4" x 4" x 1/8"	4079	4080	4081	4161
6" x 6" x 1/8"	4082	4083	4084	4162
8" x 8" x 1/8"	4085	4086	4087	4163

<sup>\*</sup>Includes two aluminum back-up plates and 50 mylar sheets.



#### Proppant Crush Test Press Models CMG28-12-PCR & CMG40-12-PCR Compatible with ISO 13503-2:2006

#### For use with frac sand, resin coated sand and ceramic proppant

Carver Inc. is proud to introduce Models CMG28-12-PCR & CMG40-12-PCR Proppant Crush Test Presses. These Monarch Series presses meet the critical demands of ISO 13503-2:2006 with unsurpassed cycle repeatability. The proportional hydraulic system is capable of applying a constant rate of 13.8 MPa/min. (2000 PSI min.) from 2 ton to 28 ton clamp force within a  $\pm 2.5\%$  deviation. The operator interface allows easy setup of press control parameters and includes ample recipe storage.

- 28 and 40 ton models
- Hardened plates: 12" L-R x 12" F-B fully guided platens to ensure parallalism
- Positive stop on plates for centering the crush die
- Open daylight: 6"-12"
- Cylinder stroke: 6"
- · Self-contained hydraulic system
- Available with and without 2" ID crush die (compatible with ISO 13503-2)
- · "Mini" Viewpoint control system including:
  - · Allen Bradley programmable controller
  - PanelView Touch Screen Interface
  - · Closed-loop control of clamp pressure
  - Recipe storage (up to 30 recipes of 24 segments)
  - Two hand close buttons
- Polycarbonate safety guards around molding area with manual sliding interlocked operator gate
- Dimensions: 47" W x 34" D x 74" H
- Weight: 1,900 lbs.



#### No. 5456 Proppant Crush Test Cylinder

Based on ISO 13503-2:2006(E) Crush Cell Cell: 2" ID x 3.38" tall including removeable base, wall thickness is >0.5"

Piston: 3.5" tali

All parts constructed of D2 Tool Steel, hardened to 52-56 Rockwell C



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

# Heated Manual Presses with Digital Temperature Controls & Safety Shields

7.5, 12, 25 and 30 ton capacity

(Thermostatic Temperature Control also available, Consult Factory for details)













No. 3690 No. 4386 No. 4120 No. 3856 No. 4126 No. 4128

#### 7.5 TON PRESSES

- No. 3690 (Model 7.5-15H)
- Seven and a half ton, four-column press with 15" x 15" electrically heated platens
- Designed for applications needing lower force over a larger area
- · Shown with optional digital gauge

#### **12 TON PRESSES**

- No. 4386 (Model CH)
- Twelve ton, manual, two-column hydraulic lab press with digital heated platens
- · Daylight up to 15"
- Easy-to-read dual scale gauge, reading in pounds force 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, reading in pounds force 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, reading in pounds force 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" day lights
- · Optional water cooled platens also available

#### **25 TON PRESSES**

- No. 4389 (Model MH)
- Twenty-five ton, manual, two-column hydraulic press with digital heated 9" x 9" platens
- Daylight opening is adjustable
- Rigid cast iron and steel construction for precision and durability
- Easy-to-read dual scale gauge, reading in pounds force and metric tons
- · Optional water cooled platens also available
- No. 3856 (Model 25-12H)
- Twenty-five ton, manual, four-column hydraulic press
- Easy-to-read dual scale gauge, reading in pounds force and metric tons
- Electrically heated 12" x 12" platens for temperatures to 650°F with digital controller for each platen
- Optional water cooled platens also available
- No. 3693 (Model 25-15H)
- Twenty-five ton, four-column hydraulic press
- The 15" x 15" heated platen area allows for larger work area
- Standard with dual scale analog gauge
- Easy-to-read dual scale gauge, reading in pounds force and metric tons

- 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 also available

#### **30 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
- Easy-to-read dual scale gauge, reading in pounds force and metric tons
- 12" x 12" electrically heated platens for temperatures to 650°F with digital controller for each platen
- 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 also available

NOTE: Pictures shown with both analog gauge and digital gauge. Standard manual presses come with analog gauge. Digital gauges available upon request. Consult factory for details. Information on digital gauges may also be found on page 13.

SPECIAL 30 TON HIGH TEMPERATURE (1,100°F) PRESSES AVAILABLE. Consult factory for details.

C € available c



Catalog Number	3690	4386	4120	4122	4123	4389	3856	3693	4126	4128	4129
Model	7.5-15H	Model CH	12-10H	12-12H	12-12H,C	Model MH,C	25-12H	25-15H	25-12H,C	30-12H	30-12-2H
Clamping Force											
U.S. Tons Lbs	7.5 15,000	12 24,000	12 24,000	12 24,000	12 24,000	25 50,000	25 50,000	25 50,000	25 50,000	30 60,000	30 60,000
Max. Temp. (°F)	650°	650°	650°	650°	650°	650°	650°	650°	650°	650°	650°
Platens (in)	15 x 15	6 x 6	10 x 7	12 x 12	12 x 12	9 x 9	12 x 12	15 x 15	12 x 12	12 x 12	12 x 12
Ram Stroke (in)	5.1	5.1	5.1	5.1	5.125	6.5	6.5	6.5	6.5	6	6
Daylight Opening (in)	5	0 to 15	0 to 9	0 to 10	2 @ 2.5	2@3	0 to 9.5	5	2@3	0 to 12	2@3
Dimensions w x d (in)	32 x 28	19 x 16	26 x 18	29 x 27	29 x 27	23 x 24	29 x 27	32 x 28	29 x 27	32 x 27	32 x 27
Height (in)	30	39	39	44	46	38	42	35	46	46	46
Weight (lb)	900	300	420	770	1,062	450	805	1,200	1,065	835	1,100

### Standard Unheated Manual Presses

12, 25 and 30 ton capacity

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













No. 3850 No. 3851 No. 3968 No. 3853 No. 3855 No. 3970

#### **12 TON PRESSES**

- No. 3850 (Mini C)
- Twelve ton, manual, two-column hydraulic press with 6" x 6" work area
- 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, reading in pounds force and metric tons
- No. 4350
- Pellet press with 4" round platen
- Available with and without pellet die (see page 10)
- 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, reading in pounds force and metric tons

- No. 3968 (Model 12-10)
- Twelve ton, manual, two-column hydraulic press, with 10" x 7" work area
- Similar to No. 3851 press described above, but heavier construction with fully guided moving platen and daylight to 14"
- Easy-to-read dual scale gauge, reading in pounds force 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, reading in pounds force and metric tons

#### **25 TON PRESSES**

- No. 3853 (Model M)
- Twenty-five ton, manual, two-column hydraulic press, with a 9" x 9" work area
- · Daylight opening is adjustable
- Rigid cast iron and steel construction for precision and durability
- Easy-to-read dual scale gauge, reading in pounds force and metric tons

- **No. 3855** (Model 25-12)
- Twenty-five ton, manual, four-column hydraulic press with a 12" x 12" work area
- Easy-to-read dual scale gauge, reading in pounds force and metric tons

#### **30 TON PRESSES**

- No. 3970 (Model 30-12)
- Thirty ton, manual, four-column, hydraulic press with a 12" x 12" work area
- Has two-speed pump, first stage for rapid closing and second for pressing mode
- Easy-to-read dual scale gauge, reading in pounds force and metric tons

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

NOTE: Standard manual presses come with analog gauge (as shown in pictures). Digital gauges available upon request. Consult factory for details. Information on digital gauges may also be found on page 13.

C € available

Catalog Number with shield	3850	4350	3851	3968	3969	3853	3855	3970
Model	Mini C	Pellet	Model C	12-10	12-12	Model M	25-12	30-12
Old Press*	3393	3620	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)	25 (50,000)	25 (50,000)	30 (60,000)
Platens (in)	6 x 6	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	6.5	6.5	6
Daylight Opening (in)	0.75 to 7	0 to 5.50	0.75 to 18	1 to 14	1 to 15	0.75 to 16	1 to 14	1 to 17
Dimensions w x d (in)	12 x 16	10.5 x 15	15 x 16	17 x 18	21 x 28	19 x 24	21 x 28	29 x 27
Height (in)	25	23	39	39	44	42	42	46
Weight (lb)	125	115	200	345	560	350	600	625

<sup>\*</sup>Use to refer to old models which are no longer available.

# **Presses for preparing pellets, bricks, briquettes and cakes**

No. 4350, 12 ton Manual Pellet Press (less the die)

C € available



#### Manual Pellet Presses (4350, 4555 & 4565)

The compact 12, 40 or 50 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 and 13mm evacuable die. (not shown in picture)



No. 3887 25 ton AutoPellet Press

€ available

C US Panel available

#### AutoPellet Presses (3887 & 4387)

The self-contained 25 & 40 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. The touch screen control interface allows for programmable force and programmable decompression rate.

#### **Specifications**

Catalog Number	Max. Clamp Force, U.S. Tons (lb)	Platen Dia. (in)	Die (mm)	Ram Stroke Stroke (in)	Daylight Opening (in)	Footprint W x D (in)	Height (in)	Weight (lb)
4350	12 (24,000)	4	13	5.1	0.0 to 5.5	10.5 x 15.0	23	115
4350L	12 (24,000)	4	N/A	5.1	0.0 to 5.5	10.5 x 15.0	23	115
4555	40 (80,000)	4	31	6.0	0.0 to 6.0	32.5 x 15.0	31.2	400
4555L	40 (80,000)	4	N/A	6.0	0.0 to 6.0	32.5 x 15.0	31.2	400
4565	50 (100,000)	4	31	6.0	0.0 to 6.0	32.5 x 15.0	31.2	420
4565L	50 (100,000)	4	N/A	6.0	0.0 to 6.0	32.5 x 15.0	31.2	420
AutoPellet 3887	25 (50,000)	5	N/A	1	1.5 to 7.25	31.5 x 19.75	22 (+ handle)	400
AutoPellet 4387	40 (80,000)	5	N/A	1	1.5 to 7.25	32.5 x 19.75	22 (+ handle)	450

Note: Pellet Models with an "L" means less die. Additional Pellet Die sizes available below and on page 13 and 15 (sold separately).



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

copy. Complete with plunger, cylinder base plug, ejector and (2) polished anvils, along with a fitting for vacuum source connection when applicable. Constructed of 440 stainless steel. Available in sample diameter sizes 6, 12, 13, 25, 31 & 40mm. Not recommended for use in heated presses. (See pages 13 & 15 for additional details)



■ No. 5021 KBr
Buffer Plate Kit Assembly
Includes: (1) KBr Buffer
Plate (90mm diameter),
mounts to the Top Bolster
and (1) 6" x 6" hardened
steel plate with centering
grooves, mounts to the

Moving Bolster on top of ram. For use with pellet dies and test cylinder outfits. (Picture shows 5021 plate kit installed in 3851 press)

#### No. 5022 KBr Buffer Plate Kit

**Assembly** Includes: (1) KBr Buffer Plate (90mm diameter), mounts to the Top Bolster and (1) 9" x 9" hardened steel plate with centering grooves, mounts to the Moving Bolster on top of ram. For use with pellet dies and test cylinder outfits.



■ No. 3874 Vacuum Pump Kit Used with pellet press to evacuate dies. (Available in 115 or 230V)



■ No. 5023 Set of (2) 6" x 6" Unheated Hardened Steel Plates for smooth surface pressing. Steel Plates

mount to top and moving bolsters.

■ No. 5024 Set of (2) 9" x 9" Unheated Hardened Steel Plates for smooth surface pressing. Steel Plates mount to top and moving bolsters.



■ No. 2090-0, 1.125" ID x 3" High, 440 Stainless Steel Test Cylinder Outfit (TCO)

No. 2091-5, 2.25" ID x 3" High, 440 Stainless Steel Test Cylinder Outfit (TCO) For use with standard unheated presses (excluding 4350 Series) for molding, forming bricks, briquettes, pressure forming, crushing, pressing plant and animal tissues, fluid extraction, extrusion and flow tests. Not recommended for use in heated presses. (See pages 13 & 15 for additional details)



No. 2090-1 Filter pads for 1.125" Test Cylinder Outfit. (set of 12)

No. 2091-1 Filter pads for 2.25" Test Cylinder Outfit.



■ No. 237005 Stainless Steel Pan Used for fluid extraction when using the

Test Cylinder Outfits and filter pads to make a sandwich sample. The stainless steel pan captures the released fluid.

# Pneumatic Low Force & Laminating Presses

#### **Pneumatic Low Force Press**

Carver's Pneumatic Low Force presses are fully guided with either two or four post construction. Benchtop or Floor Standing model presses available. The Pneumatic models provide accurate force control custom design to fit your specifications. Proportional force control or manual precision air regulator with analog gauge and/or digital force display options also available. Features include low friction seals in the clamp cylinder, linear ball bushings in the moving bolster and an optional integrated load cell design for accurate force feedback. Multiple clamp force and platen size configurations are available.

Please consult factory for details and available options.

C € available





Shown with enhanced control options

#### **Laminating Presses**

Manually operated hydraulic laminating presses with stacked heating and cooling platens in bench top model. Thermostatic control, aluminium platens, heating one opening while simultaneously cooling the other results in faster production of laminated samples, plastic plaques and other R&D items. Temperature control 150-500°F (Shown with analog gauge)



■ No. 4130 (formerly 2112) Laminating Press, 12 ton capacity with Safety Shield Four 6" x 6" aluminum platens for one hot and one cold daylight opening. Thermostat control of heated platens in top opening as shown in picture to the left.

No. 4132 (formerly 2630) Laminating Press, 30 ton capacity with Safety Shield Four 12" x 12" aluminum platens for one hot and one cold daylight opening. Digital control of heated platens in top opening.

#### **Specifications — Laminating Presses**

Catalog Number	4130	4132
Model Number	150-C	30-12-L
Old Model Number*	2112	2630
Clamping Force, U.S. tons (lb)	12 (24,000)	30 (60,000)
Platens Size (in)	6 x 6	12 x 12
Stroke (in)	5-1/8	6
Daylight Openings (in)	2 @ 1-3/4	2@3
Dimensions w x d x h (in)	16 x 19 x 39	32 x 27 x 46
Weight (lb)	265	1,000
Supply Voltage	115V or 230V - 1ph	230V - 1ph
Temperature Range	150-500 deg F	150-500 deg F

Note: Available in deg C upon request. \*Use to refer to old models which are no longer available.

# **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 for thermostatically controlled platens and digitally on the digital platen packages.

Note: All heaters are single phase unless otherwise noted.





CUL available for digital controls only



Heated Platens
Thermostat Control



Heating/Cooling Platens Thermostat Control



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



**Cooling Platens** 

#### **Specifications**

For Presses Catalog Number/Model	Platen Size (in)	Heated Platens Thermostat Control (230V available upon request)	Heated Platens Digital Control	Heating/Cooling Platens Thermostat Control	Heating/Cooling Platens Digital Control
<b>3850</b> /Mini C	6 4 6	<b>2101 -</b> aluminum 150 to 500°F, 115V	<b>3796 -</b> steel to 650°F (115V)	<b>2103.1 -</b> steel	<b>3772 -</b> steel, with hoses to 650°F (115V)
<b>3851</b> /Model C <b>4130</b> /150-C	6 x 6	<b>2102.1 -</b> steel 150 to 500°F, 115V	<b>4286</b> - steel, to 650°F (230V)	150 to 500°F	3988 - steel to 650°F with hoses (230V)
<b>3853</b> /Model M	9 x 9	<b>2107.1</b> - steel 150 to 500°F, 115V	<b>3973 -</b> steel to 650°F (230V)	<b>2108.1 -</b> steel 150 to 500°F	<b>3972 -</b> steel, with hoses to 650 °F (230V)
<u>F</u> our-column	12 x 12		<b>3906 -</b> steel to 650°F (230V)		<b>3749</b> - steel with hose assemblies to 650 °F (230V)
Presses	15 x 15		<b>6316 -</b> steel to 650°F (230V)		

#### **Optional Heat Tube Platens Available**

For both Carver Benchtop and Floor Standing Presses



#### Accu-Heat™ Heat Tube Platens - For heat uniformity

- Accuracy and uniformity up to ±1 F° approx.
- Standard sizes include; 6" x 6", 9" x 9", 12" x 12", 15" x 15", 18" x 18" and 24" x 24"
- Custom engineered sizes quoted upon request
- 500°F maximum temperature
- Heated/cooled configuration also available
- Can be designed to fit existing Carver or other brand presses
- Contact factory for details and/or to request a quotation

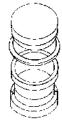
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# Laboratory Accessories for Carver Presses



#### 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, lower punch and 3 spacers for optional film thicknesses.

#### **Molds, Dies and Test Cylinder Specifications**

Catalog Number	Description	Sample Dimensions	Sample Thicknesses	Maximum Applied Load
818701D	Tile Mold, 440 Stainless Steel	50mm x 50mm	1mm, 2mm & 5mm	N/A
818702D	Tile Mold, 440 Stainless Steel	100mm x 100mm	1mm, 2mm & 5mm	N/A
818703D	Tile Mold, 440 Stainless Steel	150mm x 150mm	1mm, 2mm & 5mm	N/A
818704C	Color Dispersion, 440 Stainless Steel	50mm diameter	0.1mm, 0.2mm & 0.5mm	N/A
818705C	Color Dispersion, 440 Stainless Steel	100mm diameter	0.1mm, 0.2mm & 0.5mm	N/A
4417	Pellet Die, 440 Stainless Steel	6mm	N/A	3,500 Lbs Max
4946	Pellet Die, 440 Stainless Steel	12mm	N/A	13,000 Lbs Max
3619	Pellet Die, 440 Stainless Steel	13mm	N/A	18,000 Lbs Max
4369	Pellet Die, 440 Stainless Steel	25mm	N/A	47,000 Lbs Max
3902	Pellet Die, 440 Stainless Steel	31mm	N/A	60,000 Lbs Max
3876	Pellet Die, 440 Stainless Steel	40mm	N/A	70,000 Lbs Max
2090-0	Test Cylinder, 440 Stainless Steel	1.125"	N/A	19 US Tons Max
2091-5	Test Cylinder, 440 Stainless Steel	2.25"	N/A	51 US Tons Max
818698D	Tile Mold, 440 Stainless Steel	4" x 4"	1mm, 2mm & 5mm	N/A
818699D	Tile Mold, 440 Stainless Steel	6" x 6"	1mm, 2mm & 5mm	N/A
818700D	Tile Mold, 440 Stainless Steel	10" x 10"	1mm, 2mm & 5mm	N/A

#### Special Application Test Cylinder (See page 7)

	, , , , , ,
Catalog Number	Description
5456	Based on ISO 13503-2:2006(E) Crush Cell; Cell: 2" ID x 3.38" tall including removeable base, wall thickness is >0.5" Piston: 3.5" tall; All parts constructed of D2 Tool Steel, hardened to 52-56 Rockwell C



### ■ 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. 2096CE & 2096-1CE Two Gauge Manifolds

The 2096CE is for most standard manual presses, except the Mini C. The 2096-1CE is specifically designed for the Mini C Model Press only. These manifolds permit mounting of both high (right) and low (left) range gauges for more precise application of force. Hand operated shut-off valve

protects low pressure gauge when using high pressure. Analog Gauges sold separately. (see page 15)



# No. 818744C Punch and Die Holder

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. (does not include dies)



#### No. 6306 Digital Gauge

Optional digital force gauges for manual presses. Available in 10 or 100 pound increments. They are scaled per press model. Approximate accuracy: ±1% of reading between 1,000 lbs up to maximum tonnage of press (12, 25 or 30 tons). Consult factory for press details.

### **Laboratory Accessories** for Carver Presses





#### FLOOR STANDS - Designed for most models

Catalog/ Item Number	Description	Dimensions H x W x D	Weight				
223160C	Press Stand (Model 3690 & 3693 presses)	30" x 23.5" x 23.5"	150#				
223171D	Press Stand (2 & 4 column presses)	30" x 19" x 19"	125#				
223215C	Press Stand (2 & 4 column presses with 6" casters)		260#				
Press Stand for Standard  223321D PL Auto Series presses (excluding 48 ton models)		24" x 51" x 23.5"	385#				
Press Stand for Standard PL Auto Series presses with 6" casters (excluding 48 ton models)		24" x 51" x 23.5"	385#				



#### **SAFETY SHIELDS**

Catalog/Item Number	Description (Fits most models with or without heat)			
3404	Mini "C" Presses			
3295	Model "C" Presses			
3253	Model "M" Presses			
3322	Presses with 10" x 7" Work Area			
3418	Presses with 12" x 12" Work Area			
4427	Presses with 15" x 15" Work Area			



Repair parts for (gray) Carver hydraulic units. Repair kits contain hydraulic oil, seals, gaskets, pins, fittings, valve parts and jack handle bracket for quick maintenance. (restrictions apply, visit carverpress.com for details)

- No. 3729 12 ton hydraulic unit repair kit
- No. 3730 25 ton hydraulic unit repair kit
- No. 319002 pump assembly for 12 & 25 ton jacks

#### **ACCESSORIES**

Catalog number cross reference index

#### **HEATING/COOLING Platens for Model C Presses**

(also available in deg C upon request)

2101

Set of (2) 6" x 6" heated, aluminium platens, thermostatically controlled, 150° to 500°F (Specify 115 or 230V)

2102.1

Set of (2) 6" x 6" heated, steel platens, thermostatically controlled, 150° to 500°F, (Specify 115 or 230V)

3796

Set of (2) 6" x 6", heated, steel platens, digitally controlled, 650°F, 115V

4286

Set of (2) 6" x 6", heated, steel platens, digitally controlled, 650°F, 230V

2103.1

Set of (2) 6" x 6" heated and cooled, steel platens, thermostatically controlled, 150° to 500°F with hoses (Specify 115 or 230V)

2104

Set of (2) 6" x 6" aluminum cooling plates, with valve and hose assemblies



3772 Set of (2) 6" x 6" heated & cooled

steel platens, digitally controlled, 650°F,

115V

3988 Set of (2) 6" x 6" heated & cooled steel platens, digitally

controlled, 650°F, 230V

2105 Set of (2) 6" x 6"

aluminum steam plates, with insulation and braided hoses

**Platens for Model M Presses** (also available in deg C upon request)

2107.1 Set of (2) 9" x 9"

heated, steel platens, thermostatically controlled, 150° to 500°F, (Specify 115 or 230V)

3973

Set of (2) 9" x 9", heated, steel platens, digitally controlled, 650°F, 230V

2108.1 Set of (2) 9" x 9" heated and cooled,

2109

3972

3749

steel platens, thermostatically controlled, 150° to 500°F with hoses (Specify 115 or 230V)

Set of (2) 9" x 9" steel steam heating plates, with insulation and

braided hoses Set of (2) 9" x 9", heated and cooled,

steel platens, digitally controlled, 650°F, 230V

Platens for four-column presses (also available in deg C upon request)

3906 Set of (2) 12" x 12",

heated, steel platens, digitally controlled. 650°F, 230V

Set of (2) 12" x 12" heated and cooled

steel platens, digitally controlled. 650°F. 230V

6316 Set of (2) 15" x 15",

heated, steel platens, digitally controlled, 650°F,

230V

# **Accessories for Many Applications**

MOLDS AND		4163	(100) 10" x 10" mylar	SAFETY SHI		Two Gauge	
(See page 1			sheets for	(See page 1	,	(See page 1	,
2090-0	ers & Pellet Dies Test cylinder		8" x 8" molds	3404	For most Mini C Presses	2096 ( €-1	Two gauge manifold (mini C only)
2090-1	outfit, 1.125" ID Set of 12 filter pads	Tile Molds a Disc Molds	and Color Dispersion	3295	For most Model C Presses		
	for 1.125" ID TCO's	(See page 1 818698D	3) 4" x 4" tile mold,	3253	For most Model M Presses	6	
2091-5	Test cylinder outfit 2.25" ID	=======	1mm, 2mm & 5mm thick,	3322	For most presses with 10" x 7" platens		iii
2091-1	Set of 12 filter pads for 2.25" ID TCO's	818699D	Stainless steel 6" x 6" tile mold,	3418	For most presses with 12" x 12" platens	Dial Thermo	meters
237005	Stainless steel pan for either TCO size	0100332	1mm, 2mm & 5mm thick,	4427	For 3690 and 3693 with 15" x 15"	385001	Dial face
4417	6mm pellet die 440 stainless steel	818700D	Stainless steel 10" x 10" tile		platens		thermometer 150°F to 750°F
4946	12mm pellet die 440 stainless steel	020.002	mold, 1mm, 2mm & 5mm thick,		ANALOG GAUGES (See page 13	385019	Dial face thermometer
3619	13mm pellet die 440 stainless steel	818701D	Stainless steel 50mm x 50mm	(*)	for digital gauge options)	HYDRAULIC	50°C to 400°C
4369	25mm pellet die 440 stainless steel		tile mold, 1mm, 2mm & 5mm thick,			(Specify pres	ss Serial Number)
3902	31mm pellet die, 440 stainless steel	818702D	Stainless steel 100mm x 100mm	Gauges for	Model B/C	3912	12 ton hydraulic unit
3876	40mm pellet die, 440 stainless steel		tile mold, 1mm, 2mm & 5mm thick,	381005	Gauge normally furnished with	3925	25 ton hydraulic unit
5456	2" ID Proppant Crush Test Cylinder	818703D	Stainless steel 150mm x 150mm tile mold, 1mm,		Model C press, 0 - 24,000 lbs applied force,	321007	Pump and reservoir for 30 ton presses
	based on ISÓ 13503-2:2006(E)		2mm & 5mm thick Stainless steel		11 metric tons, 200 lb increments	3467-0	Hydraulic cylinder for 30 ton presses
2092	Page 7 & 13 Swivel bearing plate	818704C	50mm diameter color dispersion	381042	Model B/C gauge, 0 - 500 lbs,	3729	12 ton repair kit (gray only)
	(Requires safety shield)		disc, 0.1mm, 0.2mm & 0.5mm thick,		0.225 metric tons, 5 lb increments	3730	25 ton repair kit (gray only)
2095 818744C	KBr buffer plate Pharmaceutical	818705D	Stainless steel  100mm diameter	381001	Model B/C gauge, 0 - 1,000 lbs, 0.45 metric tons,	2170	Carver hydraulic fluid (pint size)
0101440	pellet die holder		color dispersion disc, 0.1mm, 0.2mm & 0.5mm thick,	204202	10 lb increments		POWER UNITS
(See pages			Stainless steel	381002	Model B/C gauge, 0 - 2,000 lbs, 0.9 metric tons,	(See page 1/ 3946NE	6) AutoPak/12,
4079	4" x 4" chase assembly, Teflon	· ·	ROCESSING	204200	20 lb increments		for 12 ton existing manual presses.
4080	4" x 4" chase assembly,	l '	ing applications)	381003	Model B/C gauge, 0 - 5,000 lbs, 2.25 metric tons,	3947NE	AutoPak/25, for 25 ton existing
4081	Stainless steel 4" x 4" chase	235020	SS Plate with #8 mirror finish,	381004	50 lb increments Model B/C gauge,	3948NE	manual presses. AutoPak/30,
4082	assembly, Brass 6" x 6" chase		polished on 1 side, 6" x 6" x 0.03" thick	002001	0 -10,000 lbs, 4.5 metric tons,		for 30 ton existing manual presses.
4083	assembly, Teflon 6" x 6" chase	235021	SS Plate with #8 mirror finish, polished on 1 side,	Courses for	100 lb increments	FLOOR STAI (See page 1	
4003	assembly,		9" x 9" x 0.03" thick	Gauges for 381008	Gauge normally	223160C	Press stand for
4084	Stainless steel 6" x 6" chase	235022	SS Plate with #8 mirror finish,		furnished with Model M press,	223171D	3690 & 3693 presses Press stand for
4085	assembly, Brass 8" x 8" chase		polished on 1 side, 9" x 12" x 0.03" thick		0 - 50,000 lbs applied force,		2 column and 4 column presses
4086	assembly, Teflon 8" x 8" chase	235023	SS Plate with #8 mirror finish,		22.5 metric tons, 500 lb increments	223215C	Press stand for 2 column and
	assembly, Stainless steel		polished on 1 side, 12" x 12" x 0.03" thick	381006	Model K/M Gauge, 0 - 5,000 lbs,		4 column presses with casters
4087	8" x 8" chase assembly, Brass	Heated Test			2.25 metric tons, 50 lb increments	223321D	Press stand for standard PL Auto
4161	(100) 6" x 6" mylar sheets for	2472	1.125" heated test cylinder	381007	Model K/M Gauge, 0 - 10,000 lbs,		Series presses (excluding
4162	4" x 4" molds (100) 8" x 8"	2417	2.25" heated		4.5 metric tons, 100 lb increments	223319C	48 ton models) Press stand for
4102	mylar sheets for 6" x 6" molds		test cylinder	381176A	Model K/M Gauge, 0 - 1,000 lbs, 0.45 metric tons,	2233190	standard PL Auto Series presses with casters
					10 lb increments		(excluding 48 ton models)

### Add Power to Existing Presses

#### AutoPak™ Power Units

- Self-contained 1/4 HP hydraulic power unit
- Develops maximum clamping force for most of our 12, 25 and 30 ton manual press models (minimum 1.000 lbs)
- Six feet of hose for connecting to existing Carver hand operated press
- Programmable control system (force only)
- Touch screen interface
- 10 recipe storage capability
- 20 programmable segments of clamp force and dwell time per recipe
- Programmable in units of pounds (also available in Kg, US tons, and metric tons)
- Automatic bump sequence (can be programmed in any or all segments)
- Two-hand "anti-tie-down" close buttons for operator safety
- Interlocked switch for existing safety shield door included (See page 14 for recommended safety shield)
- 115V 1-Ph or 230V 1-Ph supply voltage (please specify)
- Electrical disconnect (non-fused)
- Approximate dimensions & weight: 24" L x 20" W x 21" H, 130 lbs

Catalog No.	Model	Capacity (tons)	Supply Voltage (230V available upon request)
3946-NE	AutoPak/12	0.5 - 12	115V 1-Ph
3947-NE	AutoPak/25	0.5 - 25	115V 1-Ph
3948-NE	AutoPak/30	0.5 - 30	115V 1-Ph

Specify press model and serial number when ordering



#### **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 custom designed Auto Series four column press with casters and built in floor stand.

#### **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.

Warranty claims: Please contact our Service Department at 260-563-7577 ext 5238 or service@corpemail.com





### Rely on Carver and Wabash Presses for Every Need

Carver, Inc. and Wabash MPI are sister companies located in Wabash, Indiana. For over 75 years Wabash MPI has met the challenge of designing and manufacturing standard and special presses for industry worldwide. Parts, service and support information are readily available. Ask to see installations of Carver or Wabash presses performing productively in your area. Consult with us to discuss all of your molding requirements.



Wabash manufactures 15 to 1,000 ton molding machines for elastomers and thermoplastics, Compression molding machines, C-Frame presses, Vacuum chamber molding and laminating presses and Trim presses. For more information on any of our presses call 260-563-1184, fax 260-563-1396, email: wabashleads@acscorporate.com, or visit our website at www.wabashmpi.com.



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