

High Production, Double Lift Box Baler CB-400

FISHBURNE INTERNATIONAL

1 High side loading resistance of **Welded Cylinder** construction and latest seal technology prevent product contamination from fluid leaks.

2 Long wearing **Cam Track** and 6 point **Lift Box** guidance ensures safe control of ram and bale during compaction.

3 **Pusher** predensifies each charge, increasing capacity without overworking trampler and produces dimensionally stable bales.

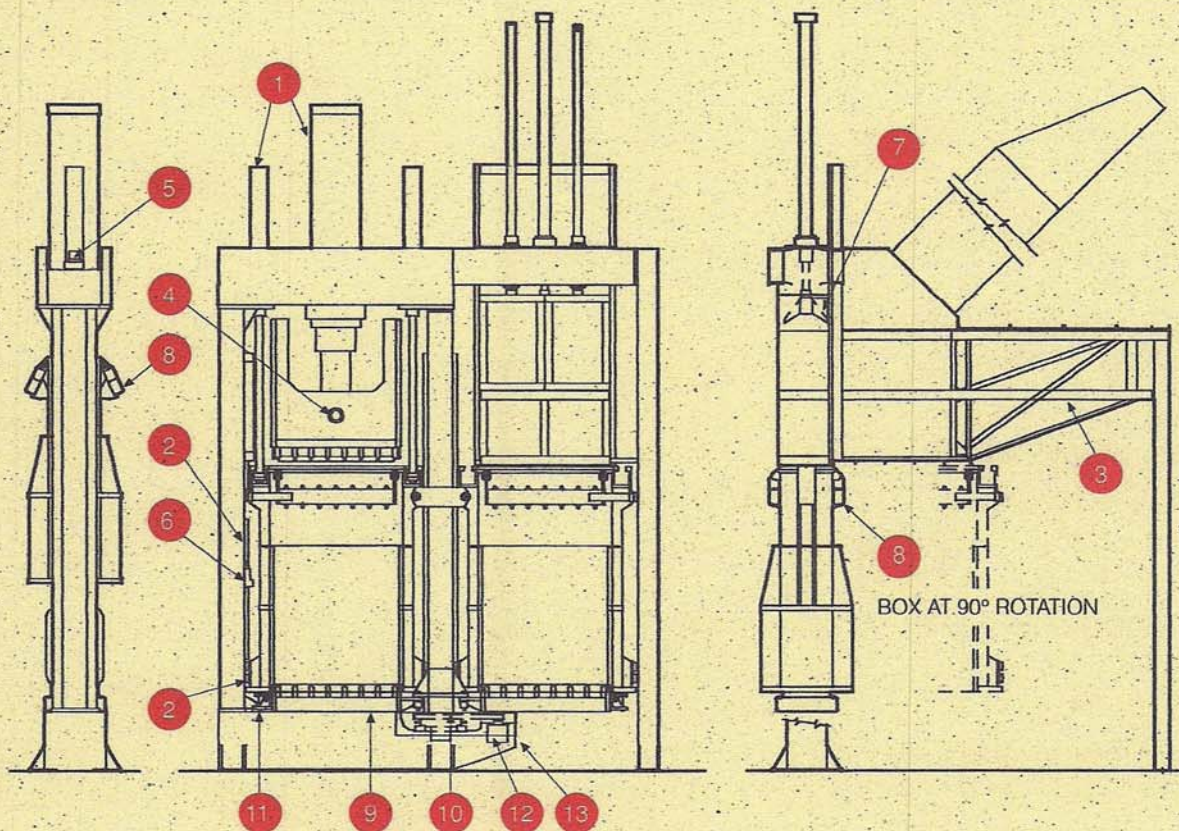
4 4" diameter **Cross Pin** connects the upper platen to the ram and is never exposed to main compaction forces. Ram force is applied only to the upper platen base plate.

5 Pre-stressed **Strain Rods** eliminate frame stretch and column bolt fatigue.

6 **Lift Box Safety Lock** holds the box up in the event of a system failure.

7 Bolt-on **Fiber Gate Lifting Brackets** simplify gate replacement.

8 Cam operated **Dogs** need no separate actuators and are easily replaced.



9 Spring mounted **Lower Platens** eliminate the need to raise boxes for rotation.

10 Two piece **Turning Sprocket** makes replacement simple.

11 **Latch and Jack System** ensure that platen is up and locked before rotation can begin.

12 Smooth, simple **Box Rotation** is performed with an hydraulic motor so no gearbox, fluid coupling or reversing motor starter is necessary.

13 The **Bottom Sill** offers easy access to the box rotation drive and no trap point exists between the sill and the lower platen on the trampler side of the press.

■ **Energy efficient Pumps and Motors**, flooded suction, circuit valves with signal lights and relief valve protection ensure optimum operation.

■ **Totally hydraulic operation**, eliminating mechanical tamper actuation and the need for clean, dry air supply. ■ **Operator Console** is a control and diagnostic center with a lighted engraved baler layout indicating the exact state of the system function.

High Production, Double Lift Box Baler

Type

Down Packing, Double Lift Box, Vertical Fiber Baler

Baler Force Range

Main Ram – 200 to 442 tons

Lift Box Cylinder – 112 tons

Tramper Ram – 10 tons

Material Packed

Cotton, wool, linen, flax and synthetic fibers

Density (Delivered to press) – From 6.5 to 16 kg/m³
(0.4 to 1.0 lbs/ft³)

Delivery Rate (to press) – Up to 6,800 kg (15,000 lbs) per hour

Charging (Filling) System

Charge Accumulation – based on fiber density, number of charges to make finished bale weight, and finished bale dimensions. Practical charge is usually limited to 2.0 m³ (70 ft³), a variable based on loose fiber density as furnished to the press.

Charge Weight Determination – performed by hydraulic transducer

Charging Method – to be determined by customer

Charging Frequency – a single finished bale will require up to 18 charges depending on the loose fiber density, required bale weight and desired production rate

Structural Features

Frame Assembly – utilizes 4" plate weldments for box rotation unit and cylinder support. End supports are tubular columns. Tie rods provide a 4:1 safety factor

Lift Box – ½" plate with high strength 2" ribs and bracing

Pusher Assembly – structural channels and sheet metal for lightweight, high-speed operation

Tramper Box – tubular framed sheet metal equipped with access door for viewing product

DIMENSIONS

Floor Area – 4,534 mm (14' 10½") long x 940 mm (3' – 1") wide

Height Above Floor – 8,001 mm (26' 3")

Box Swing Radius – 2,013 mm (6' 7½")

Hydraulics

CYLINDERS

Main Ram, Tramper Ram and Box Cylinders – sized to create forces appropriate to the production of bale densities yielding the required bale weight

Cylinder Packing – Elastomer and/or fiber type with bronze internal parts and bearings

Hydraulics, cont.

PUMP UNIT

Flooded suction design reservoir, cartridge valves, pump, and electric motor drives

Drive Power – 75 kw (100 HP)

Pump Outputs – 68 liters per minute (18 gpm) @ 55 bar (800 psi). 129 liters per minute (34 gpm) @ 345 bar (5,000 psi). 242 liters per minute (64 gpm) @ 104 bar (1,500 psi). 246 liters per minute (65 gpm) @ 138 bar (2,000 psi).

Filtration – 10 micron

Reservoir Capacity – 1,892 liters (500 US gallons)

Controls

Electrical PLC logic featuring manual take-over and then return to automatic operation without the loss of operational sequence

Electrical Power Requirements

220 / 380 / 440 / 575 VAC, 3 phase, 50 to 60 hertz at 45 to 140 KVA for hydraulic pumps; press fiber charging components and operations

110 / 120 VAC, single phase, 50 to 60 hertz at 2 KVA for control devices, consoles and panels

Air Requirements

None

Ambient Temperature Range

0° to 60°C (32° to 140°F)

Bale Dimensions and Production Rates

Weight – 227 to 272 kg (500 to 600 lbs.)

Strap and/or Wrapping – as appropriate to the industry

Rate – 30 bales per hour minimum (cotton)

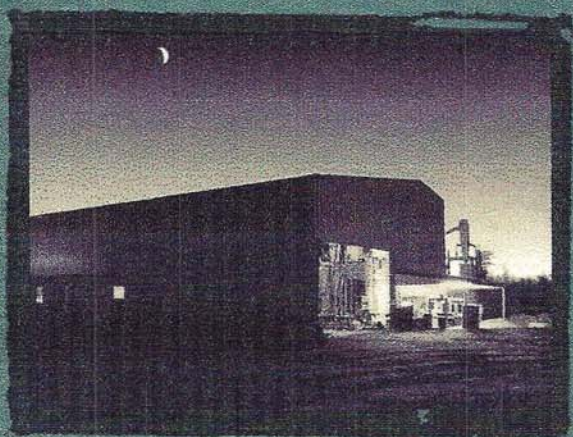
UNIVERSAL BALE DIMENSIONS*

Length	Height	Width
1,372 mm (54")*	533 mm (21")	711 mm (28")

*Other sizes available as required

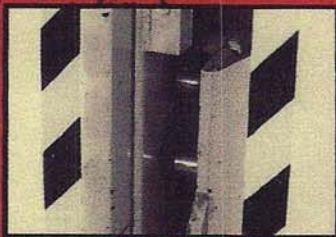
Additional Features

- Press can be a right or left hand version; bales can be ejected either to the front or the back of the press.
- World wide service on all major components.
- Two year warranty.
- Prompt field service.
- Down packing lift box (no pit, no doors).
- 30 bales per hour minimum capacity.



**THE
CB-400
HIGH
PRODUCTION
DOUBLE
LIFT
BOX
PRESS
FROM
FISHBURNE**

HIGH TONNAGE, HIGH CAPACITY, DOWN PACKING PRESS



Lift box guidance is maximized with cam follower rollers and long wearing **CAM TRACKS**. The lift box provides stabilization to the main ram through its followers and track when the box is down and the ram is compacting the bale.



The Fishburne **HYDRAULIC POWER UNIT** is a mature design based on years of experience in providing fluid power to all types of installations and in all kinds of environments. This unit features easily accessed pressure control valves, a welded steel tank with a hinged top and suction strainers that can be swivelled up and above the oil level for rapid maintenance. The design also features flooded pump suction to prevent cavitation.



The **LINT PUSHER** is large capacity and feeds cotton to the press quietly, smoothly and efficiently.

THE CB-400 HIGH PRODUCTION DOUBLE LIFT BOX PRESS

is Fishburne International's 400 ton down packing press. Extensive experience in press design and construction has addressed the special requirements of the ginning industry. The increased strain on presses due to the higher tonnages required for Universal Density bales, demands the unique engineering solutions perfected for the CB-400. This press was created to produce bales that are consistently Universal Density, 100% of the time. Designed to produce over 30 bales per hour, it can be supplied for higher capacities if needed. In the field, it can be assembled either right or left handed to conform to any plant layout.

THE CB-400 IS TOTALLY HYDRAULIC

eliminating the problems associated with mechanical trampers, pneumatic activated pushers, cylinders, and special gear motors. Over 40 years of experience in designing hydraulic presses has been incorporated into the CB-400, including the latest oil seal technology, making this system safe, practical and simple. Hydraulic box rotation allows precise control of the boxes for smooth, efficient turning and latching.

ALL FORCES ARE CONTAINED WITHIN THE PRESS FRAME,

making the CB-400 self-supporting without the use of braces to the building or additional supports. All major components are equipped with lifting lugs and attachment points for ease of rigging during installation.

THE FISHBURNE LINT PUSHER IS THE SMOOTHEST OPERATING,

largest volume (80 cubic feet) and highest capacity feeding system available. The pusher predensifies the fiber with each charge, increasing capacity without overworking the trampler and distributing the fiber evenly in the box to produce dimensionally consistent bales. The pusher cylinder is equipped with cushions on both ends for extremely smooth operation.

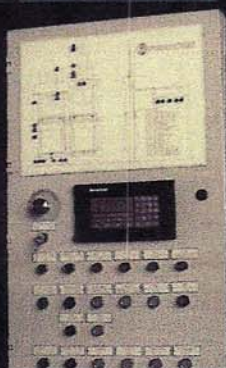


Long **UPPER PLATEN GUIDES** ensure positive tracking of the platen during compression of the bale and allow independent movement of both the platen and the boxes. The 4" cross pin connecting the platen to the ram is never exposed to the full ram force as the upper platen base plate absorbs the compression forces.



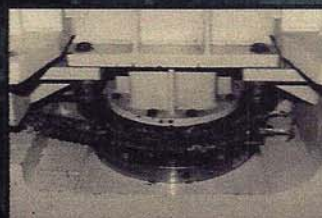
The finished U.D. bale is ejected from the press by the hydraulically actuated **BALE EJECT SYSTEM** which is an integral part of the lower platen. Sample cutters make sample collecting quick and easy.

The **OPERATOR CONTROL CONSOLE** is equipped with a solid state, programmable controller to operate the press in manual, semiautomatic, and full automatic modes. The press can be fine tuned to produce uniform bales under any operating conditions. It's diagnostic center's lighted press layout indicates the exact status of the system. A free standing console is also available.



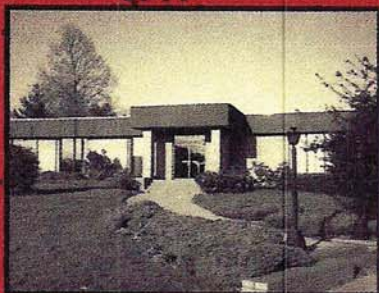
The press frame utilizes pre-stressed **STRAIN RODS** to eliminate frame stretch and column fatigue. Various parts of the CB-400 are fabricated of steel alloys that are matched to the forces encountered by the area of the press in which they are located.

This allows a press capable of withstanding tremendous stresses to be built with the most economical and efficient use of materials.



The need for lifting the entire press assembly for rotation, which distorts and deflects the turning drive chain, is eliminated by the Fishburne **LATCH AND JACK SYSTEM** and separate, spring mounted **LOWER PLATENS**. Hydraulic forces are reduced as only the weight of the platen needs to be lifted prior to turning. Large radius cutouts in the sill frame reduce stress concentrations that could cause cracking and failure. The turning sprocket is ~~is split~~ for easy replacement and the turning limit sensors are readily accessible.

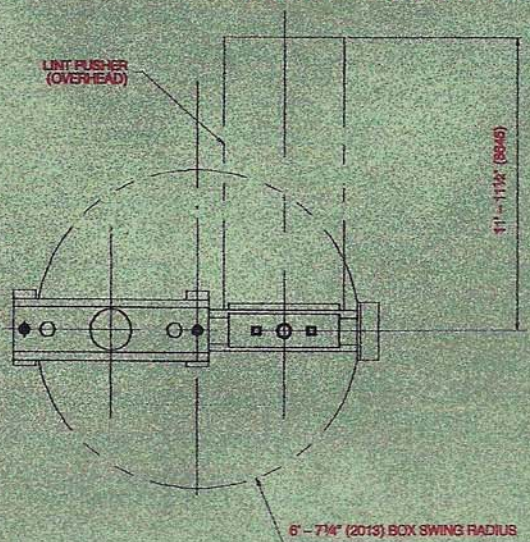
HIGH TONNAGE, HIGH CAPACITY, DOWN PACKING PRESS



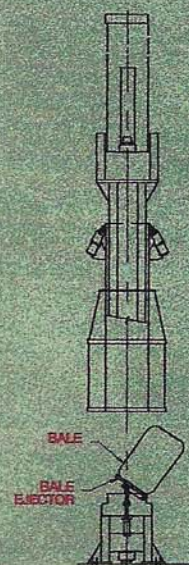
For 34 years Fishburne International has provided high quality, reliable production equipment to users of heavy presses and materials handling equipment. The heavy duty, high production, hydraulic presses, press entry and exit materials handling systems and related systems controls have become standards in the industry.

Since 1948 when Fishburne revolutionized the industry with the first "down packer" tobacco press, it's reputation for quality, reliability, innovation and service has spread into both the domestic and foreign industrial markets. The expansion and development of new improved products for the fibers industry grew naturally out of the expertise gained through years of experience in the tobacco industry. Over the past 12 years Fishburne has moved from tobacco presses to cigarette filter tow presses, to staple wastes and other man made fiber presses, to presses designed and built specifically for the cotton ginning industry. Presses are Fishburne's specialty and customer satisfaction is its promise.

THE CB-400 HIGH PRODUCTION DOUBLE LIFT BOX PRESS FROM FISHBURNE

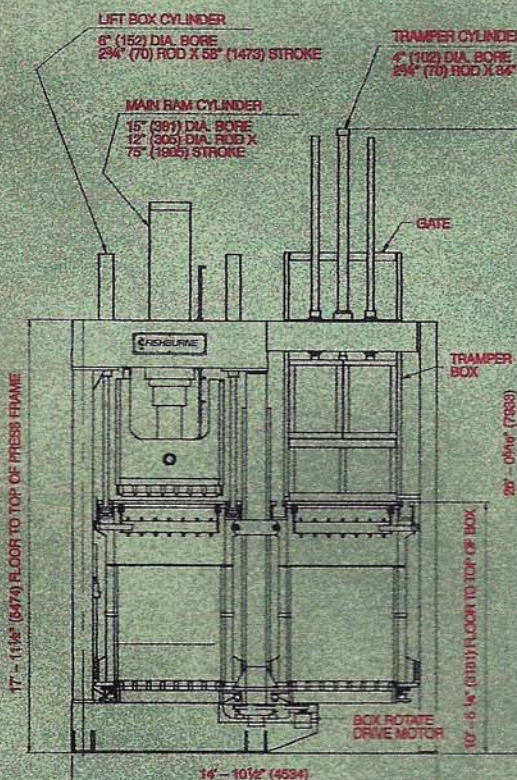


PLAN VIEW

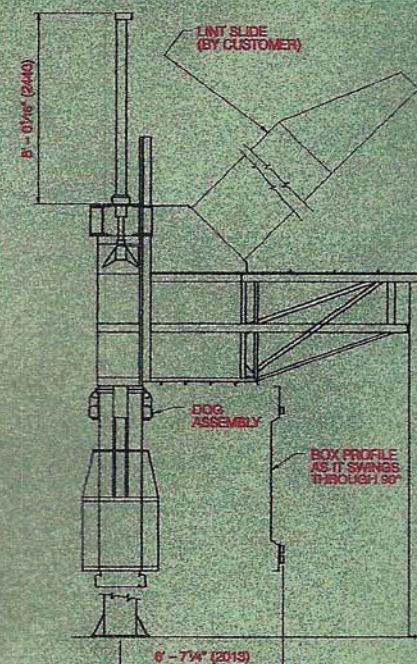


RAM END VIEW

DIMENSIONS IN PARENTHESIS ARE IN MILLIMETERS



PRESS ASSEMBLY



TRAMPER END VIEW



Fishburne International
P.O. Box 706
Arden, NC 28704

(704) 684-3521
(704) 684-4671 Fax
(800) 438-8101 Toll Free