

OPERATIONS MANUAL FOR V32/V42 VERTICAL BALER

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ATTENTION INSTALLER

MAKE SURE THE FACILITY

MANAGER RECEIVES THIS

MANUAL AND THE

WARRANTY REGISTRATION IS

FILLED OUT AND MAILED!

Product must be stored, installed, and operated in a DRY environment or damage will occur and the WILL BE VOIDED





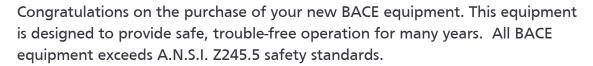
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INTRODUCTION



This Owner/Operators Manual is presented to give the owner and or operator the necessary information to properly and safely operate the equipment. It also provides information for the routine maintenance and trouble-shooting.

If, after thoroughly reading this manual there are questions about the operation or repair of the equipment, call BACE @ 877-506-2223(BACE)

Our customer support hours are 8:00 am-5:00 pm EST Monday-Friday.





MANUFACTURERS LIMITED WARRANTY

BACE, LLC (herein referred to as "BACE") warranties parts and labor for a period of one (1) year on all equipment (unless specifically noted).

BACE provides an additional two (2) years for parts replacement on major components (major components include cylinder, motor, pump and directional valve only), on all HD and XHD equipment. Balers with 1 Phase Power Units receive one (1) year parts and labor only.

BACE provides a total of ten years warranty (10) for the structure/frame on HD and XHD products and five (5) years warranty on all other equipment.

BACE's warranty is based on an 8-hour day and is devised accordingly.

Following the completion of installation of the equipment at the end user's facility, and evidence by a signed and dated installation report, and warranty registration returned to BACE will substantiate the warranty. If no registration form is remitted or the installation is not provided by the factory, the warranty period shall be considered to start on the date of shipment. As limited herein, BACE warranties the equipment sold under this warranty to be free from defects in material and workmanship.

This warranty does not apply to any defects caused by negligence, misuse, modifications, alterations, water damage to NEMA 12 components or accidents by purchaser or third parties. Warranty extends only to the original consumer and is nontransferable.

Further, at BACE's sole discretion, should it be deemed that a baler has been used for a material that it was not intended or in a manner contrary to good and safe procedures, the warranty will be void.

BACE reserves the right to void the warranty if the provided warranty card was not fully completed and/or not returned to BACE within 14 days of Equipment Delivery.



BACE reserves the right to determine if part(s) are genuine and/or defective. This warranty does not apply to any part that has been altered or repaired by any person not authorized by BACE, or which has been subjected to misuse, neglect or accident, or by any other cause beyond the control of the manufacturer.

This warranty excludes any obligation by BACE for loss of product, down time, or any other incidental or consequential damage incurred at any time.

BACE neither assumes nor authorizes anyone to assume for it any other obligation or liability in connection with such balers, compactors or containers.

If BACE's installer/distributor are not on site at the time of equipment start-up, any labor or mileage obligation under this warranty will be voided.

THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO BALERS, COMPACTORS AND CONTAINERS MANUFACTURED BY BACE AND IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIEDWARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

LIMITED WARRANTY INCLUDES:

- Repair, or replacement with a similar part, any part of the product of our manufacture which is returned to us within thirty (30) days after discovery of the defect, properly identified and transportation charges prepaid, and not more than 3 years, after purchase by original consumer.
- Shall furnish without charge, a similar genuine part to replace any part of a product of its manufacture, which proves to be defective in normal use and service during this period.
- Shall supply service labor for defective parts or workmanship with the manufacturer's
 equipment within the warranty period at the published BACE flat rate for mileage and
 labor.

LIMITED WARRANTY EXCLUDES:

- Any part(s), which has been altered, redesigned or repaired by any person not authorized by BACE.
- Water damage from outside storage, installation or operation.
- Any defected part which is the result of neglect of proper maintenance, improper installation, misuse, accident vandalism, fire or any other cause beyond the control of the manufacturer.
- Product of other manufacturers beyond such warranty as is made by such manufacturer





is null and void from this warranty.

- Shipping and special handling charges to expedite part shipment.
- Maintenance instructions and proper cleaning instructions were neglected, which are determined by BACE.
- Ejector Chains and Limit Switch adjustments
- Broken or bent Cylinders (see details below)

PROCEDURES FOR WARRANTY CLAIMS

PROCEDURES FOR WARRANTY CLAIMS FOR DEFECTIVE PARTS:

ALL THE FOLLOWING PROCEDURES MUST BE FOLLOWED ON ALL PART RETURNS

DURING THE WARRANTY PERIOD. FAILURE TO COMPLY WITH THE FOLLOWING PROCEDURES WILL ABSOLVE BACE OF SUCH CLAIMS. (SEE ATTACHED WARRANTY POLICY)

BACE CUSTOMER SERVICE: 877-506-2223(BACE)

MOTORS:

- 1. Once checked by a qualified technician who determines that no problems exist with fuses or wiring from incoming power source, then call BACE Service Department to notify us of the problem with the product model and serial number, and verify your warranty period and receive a warranty RGA number. We will then direct you to the nearest factory authorized motor diagnostic/repair facility.
- 2. If the factory facility determines that the problem is a factory defect, then the factory facility will replace the motor at no charge.
- 3. If it is determined that the motor problem was not due to a factory defect, then it will be the customer's responsibility to replace the motor.
- 4. BACE is not responsible for pick-up and delivery charges to the factory facility.

HYDRAULIC CYLINDERS:

- 1. Once checked by a qualified technician who determines that there is a problem with the cylinder, then call BACE Service Department to notify us of the problem with the product model and serial number, and verify your warranty period and receive a warranty RGA number.
- 2. BACE will at that time ship out a replacement cylinder from BACE or the cylinder





manufacturer. Shipment will be normal freight rate, unless otherwise specified by the customer. For shipments other than normal freight (i.e. The determination of overnight shipping costs will be made solely by BACE.)

- 3. The customer is responsible for shipment of the defective cylinder, within 30 days, to BACE to determine the final warranty status.
- 4. In the event the cylinder is not received within the allotted time frame, then the customer will be billed the total amount of the replacement cylinder plus S & H.
- 5. BACE will not in any circumstance warrant a cylinder that has been used to compress material outside of it's designation, nor will cylinders be warranted that bend or break as a result of side-loading. This is not a common occurrence but does happen when balers are unevenly loaded. In these instances the cylinder will fail and will not be warranted.

ALL OTHER PARTS:

- 1. Once checked by a qualified technician and determined that there is a problem with the part, then call BACE Service Department to notify us of the problem with the product model and serial number, verify your warranty period, and receive a warranty authorization number.
- 2. BACE will at that time ship out a replacement part from BACE or authorize the customer to purchase the part from an authorized distributor, factory warehouse. Shipment will be normal freight rate, unless otherwise specified by the customer. For shipments other than normal freight (i.e. The determination of overnight shipping costs will be made solely by BACE.)
- 3. It is the customer's responsibility to ship the defective part back to BACE within 30 days with the RGA#, at BACE's discretion.
- 4. If the part is not received within 30 days and or if the part does not pass warranty inspection, the customer will be invoiced for the part and will not be held responsible for any charges for the corresponding repair.
- 5. All labor and travel will be paid per BACE's flat rate schedule. The work required to replace any part must first be authorized by BACE. (See below for Flat Rate Schedule).

The invoice from the customer must be itemized to include model, serial number of unit, work performed, an BACE warranty authorization number, location of equipment, labor hours & mileage.





FLAT RATE SCHEDULE FOR LABOR AND MILEAGE:

- 1. In all cases of replacement of parts, repair of structural components the customer is required to call in to BACE Service Department for a "Warranty Authorization Number." In cases where the work has begun and will exceed the Flat Rate Schedule more than 5% of the original estimate, you will be required to contact the Service Department for approval. In cases where the hours exceed the original flat rate schedule and/or work not authorized with a Warranty Authorization Number, that claim on the excess will be denied. NO CREDIT will be allowed for labor hours spent on the inspection or diagnosis of equipment problems.
- 2. In cases of structural repair by welding, re-fabrication, or modification of an existing design, an official authorization must be obtained from the BACE Service Department prior to work. The request must have the model number, serial number, brief description or drawing of work to be done
- 3. Flat Labor Rate for warranty claims, service is \$65.00 (USD) per hour, unless written authorization from BACE.
- 4. Travel time (man and truck) will be paid at the rate of \$.50 per mile. (Mileage is limited to a maximum of 200 round trip miles.)

CAUTION: Only factory original replacement parts or equivalent should be used to insure proper operation of equipment.

FAILURE TO COMPLY WITH ALL OF THE ABOVE PROCEDURES WILL VOID ALL WARRANTY CLAIMS

PARTS WHICH HAVE BEEN REPLACED:

- 5. In the event that a part fails during the first twelve month's of the baler's warranty, the replaced part will be warranted for one (1) year from the time of installation. The labor to replace this part will be covered for 90 days after installation or the remainder of the original machine warranty, whichever is longer.
- 6. In the event that a part fails during the "part's only" period of a baler's original warranty, the replaced part will have a one (1) year warranty and the labor to replace this part will be covered for 90 days after installation.
- 7. Replacement Parts will have a one (1) year parts only warranty.

CAUTION: Only factory original replacement parts or equivalent should be used to insure proper operation of equipment.

FAILURE TO COMPLY WITH ALL OF THE ABOVE PROCEDURES
WILL VOID ALL WARRANTY CLAIMS





BACE has established some basic guidelines which will be used for the purpose of estimating jobs. These types of calls do not entail every possible scenario but do cover a majority of the issues that a baler may encounter. BACE, through its years of experience directly, and indirectly through our broad service providers has developed a grid to use for the amount of time required to fix a particular issue. These times noted below will be the maximum allowed and paid for service call items:

Service Required	Man-hours Allowed
Replace Pump	
Replace Motor	
Replace/Adjust Limit Switch	
Replace Cylinder	
Repack Cylinder	5
Replace Directional Valve	
Replace Pressure Switch	0.5
Electrical diagnosis / troubleshooting	

BACE will reimburse at the maximum rate of \$65 (USD)/hour, unless written authorization is received by BACE. Man-hours above are the maximum hours allowed. We understand that in some instances an additional technician or helper may be required. This possibility has already been included in our total hours.

As it pertains to the mileage that will be paid by BACE, there are two matters to address. First is the allocated charge per hour of travel time and second is the maximum amount of hours that will be covered. As to the first, BACE will reimburse at the same labor rate for time traveled. So a 3 hour round trip (1.5 hours each way) will include a charge of \$240.00 (USD) for travel. As a general practice, BACE does not reimburse for additional mileage fees. Relative to the second matter, BACE will only pay for 4 hours round-trip (2 hours each way) for a service call unless BACE has authorized the longer distance.





PRE-OPERATION

The Vertical Baler requires adequate clear floor space and ceiling height for proper installation and operation. Please refer to your equipments spec sheet for requirements. This space should always be kept clear of materials which could interfere with the safe operations of the baler.

BALER IS SUPPLIED WITH NEMA 4 CONTROLS AND MUST BE STORED, INSTALLED AND OPERATED IN A DRY ENVIRONMENT OR DAMAGE MAY OCCUR AND WARRANTY WILL BE VOIDED (Weather covers are available).

POSITIONING

Positioning the vertical baler so that the sufficient room is available for proper and safe operation. The back of the baler should be placed no less than 24 inches from any structure to allow room to insert wires and tie of the bale. Also, enough room in front of the baler must be present to allow the chamber door to swing fully open so the finished and tied bale can be ejected. MUST BE STORED, INSTALLED AND OPERATED IN A DRY ENVIRONMENT OR DAMAGE MAY OCCUR.

ANCHORING

BACE recommends mounting the baler on a pad of steel reinforced concrete with a minimum of 3000 psi capacity. The pad should be at least 4 inches deep. The baler should be anchored to the pad adequately. Please refer to your equipments spec sheet for requirements. To allow for construction variances, the holes should be drilled after locating the baler in the desired position.

ELECTRICAL

A lockable fused disconnect switch (customer furnished) must be installed within 5 feet, and in the line of site of the baler electrical enclosure. This disconnect must be sized in accordance with the baler motor and voltage. (See Figure 1.1 for Single Phaseand Figure 1.2 for 3 Phase).

HYDRAULIC

Check for any hydraulic oil leaks and make sure that all hoses are tight.

NOTE: Ensure the plug has been removed from the hydraulic reservoir and the breather cap is installed. Failure to do this step will result in the Power Unit being damaged!





FINAL CHECKLIST BEFORE OPERATING YOUR BALER FOR THE FIRST TIME

In some cases the machine is shipped with the cylinder lowered. Inspect to make sure cylinder is bolted to the frame of the machine <u>before</u> the machine is operated.

- Install Breather Cap into Hydraulic Tank.
- Make sure all appropriate safety decals are present and in their proper locations.
- Check the baler motor is wired for the correct voltage.
- Check that motor rotation is clockwise.
- Check that the motor starter has the correct thermal overloads for the installed voltage and that the transformer is wired for the correct voltage.

ELECTRICAL REQUIREMENTS

Figure 1.1 Single Phase Motor Voltage

Motor	Voltage	Full Load Amps	Power Supply Required
2HP	115V	16A	30A
2HP	230V	12A	20A

Figure 1.2 Three Phase Motor Voltage

Motor	Voltage	Full Load Amps	Power Supply Required
3HP	208V	13A	30A
3HP	230V	11A	20A
3HP	460	6.5A	15A





MAINTENANCE INFORMATION

Note: BACE recommends that you maintain a record of your preventative maintenance inspections. Failure to perform regular maintenance may result in damage to the Baler.



CAUTION

LOCKOUT / TAGOUT: No Adjustments, Repairs, Or Cleaning should be done to the baler without removing the power by switching off the Electrical Disconnect.

DAILY:

- Inspect for Oil Leaks.
- Inspect Oil Level.
 - Note: With the Platen Up, Hydraulic Tank should be 3/4 full.
- Inspect the following for Loose, Damaged or Missing:
 - Bolts
 - Ejector Chains
 - Limit Switches
 - Welds
 - Safety Decals
 - Guards
 - E-Stop Switch
- Inspect for Debris:
 - Remove All Debris Around Baler
 - Remove All Debris From Top Of Platen

MONTHLY:

- Check for Signs of Wear:
 - Inspect Cylinder for Scars on Rod
 - Oil Leaks
 - Mounting Bolts are Tight
 - Door Hinges/Hand Wheel for excessive play
 - UHMW on Gate and Platen for abnormal wear
 - Lubricate moving parts (Sprockets, Chains, Hinges and Turnbuckle (Repair or Replace if Required)
- Check Hydraulic Oil.
 - Should not be Cloudy or Milky in appearance (Replace if Required)
- Check Air Breather/Filter. (Replace if Required)
- Check Oil Filter; located in the Hydraulic tank under the access panel.
 - Change Every 12 Months
- Check Hydraulic Fittings and Connections. (Repair or Replace as Required)





YEARLY:

BACE recommends that an annual preventative maintenance schedule be arranged with your installer. Baler should be inspected one year after the baler has been installed or twice per year if the baler is used on multiple shifts. Your installer will be happy to set up a calendar reminder to ensure that regular PM's are set and accomplished.

Should you have further questions regarding annual PM's on your vertical baler, please call our corporate offices at 877-506-BACE (2223)



CAUTION

Before performing any maintenance, always "LOCK AND TAG OUT THE DISCONNECT."





BALER LOCKOUT/TAGOUT



CAUTION

Before performing any maintenance, always "LOCK AND TAG OUT THE DISCONNECT."

This procedure establishes the minimum requirements for the lockout of a baler for service. It shall be used to ensure that the machine is isolated from all potentially hazardous energy, and locked out before employees perform any servicing or maintenance activities where the unintentional power-up could cause serious injury or fatality due to the electrocution or due to entrapment in moving parts. This procedure should be performed only by authorized personnel only.

- 1. Before locking baler out for service or repair, locate which breaker of disconnect applies to the baler to be locked out. Notify all affected employees that a lockout system is going to be utilized and the reason therefore.
- 2. If the machine or equipment is operating, shut it down by the normal stopping procedure. Run press head/ram down to full stroke & press emergency stop button.
- 3. Lock out the disconnect or breaker that controls the baler. If locking out a breaker use a double-pole breaker lockout and lock.
- 4. Lockout the energy isolating devices with assigned individual locks. If more than one person is servicing the baler, then a hasp with a lock for each service person shall be used.
- 5. After ensuring that no personnel are exposed, and as a check on having closed the appropriate breaker or disconnect, have a qualified electrician confirm there is no power to the Baler. Then push the stop button. The baler is now locked out.
- After the servicing and/or maintenance is complete and the equipment is ready for normal; production operations, check the area around the machines or equipment to ensure that no one is exposed.
- 7. After all tools have been removed from the baler and employees are in the clear, remove the lockout device. Operate the start button to restore energy to the baler.





EMERGENCY OPERATION

Should an emergency occur while operating the baler, press the <u>RED STOP BUTTON</u> and the baler will terminate all functions and shut down.

EVERYONE AUTHORIZED TO OPERATE THE BALER SHOULD KNOW THIS EMERGENCY PROCEDURE.

CAUTION! IMPORTANT! READ BEFORE OPERATING THE BALER.

BACE Balers meet and exceed all safety standards set by A.N.S.I. Although BACE has included many safety features in the design and construction of the baler, safe operation of the equipment depends on the operator's adherence to the certain guidelines. To prevent accidents to the personnel or damage to the baler, the operator MUST NEVER VIOLATE ANY OF THE FOLLOWING SAFETY PRECAUTIONS. It is the client's responsibility to ensue these guidelines are known and followed by all operators of the baler.

NOTE:

Publication of these safety precautions does not imply or represent and inclusive list.

NEVER place hands or arms in the baler while it is operating.

NEVER stand behind the baler while it is operating.

NEVER climb in or on the baler, nor perform any maintenance/repairs unless the power is disconnected and locked out.

NEVER allow anyone except qualified electrical or hydraulic repair persons to work on the equipment.

NEVER disable any safety switch.

NEVER overload the baling chamber.

NEVER place concrete, heavy steel plate or castings, explosive materials, liquids, nor hazardous waste in the baler.

NOTE:

Hydraulic oil is the primary element of power transmission on the baler. Remember that hydraulic systems can remain pressurized even after the motor has stopped and the power is disconnected.





BALER OPERATIONS



CAUTION

To avoid side loading, keep material level in Baling Chamber or damage could occur.

- 1. Ensure that the ejector chains are untwisted and set correctly in the grooves of the baler chamber floor.
- 2. Close and lock main door by tightening hand wheel lock.
- 3. Open Loading Door and Load Material to be baled.
- 4. Close Loading Door.
- 5. Turn Key Switch to ON Position.
- 6. Press the Down Push Button, Platen will automatically cycle.

Repeat Steps 3 through 6 until Bale is formed. When the Full Bale arrows align, Press the Emergency Stop Button.

TIE-OFF AND EJECT BALE:

- 7. Open Main Door when Platen is stopped in down position.
- 8. Insert Baling Wires through the floor slots and ensure proper PPE is being used.
- 9. Insert Baling Wires back through the Platen slots from the rear of the Baler.
- 10. Tie-Off Baling Wires located in the front of Baler.
- 11. Located at the REAR of Baler, hook up the Ejector Chain (s) to the Red Platen Brackets.
- 12. Place pallet in front of baler chamber opening to receive the bale (if desired)
- 13. Stand clear of the front of Baler and push the UP push button. (Notice that the Bale will automatically eject.)
- 14. Remove bale.
- 15. Close main chamber door and tighten door hand wheel lock.

 (DO NOT LOAD NEW MATERIAL AT THIS POINT. WAIT UNTIL STEP 16 IS COMPLETE.)
- 16. Remove ejector chains from their RED platen brackets and hang on the storage peg on rear of baler.

Ready to repeat steps 1 through 16 for next Bale.



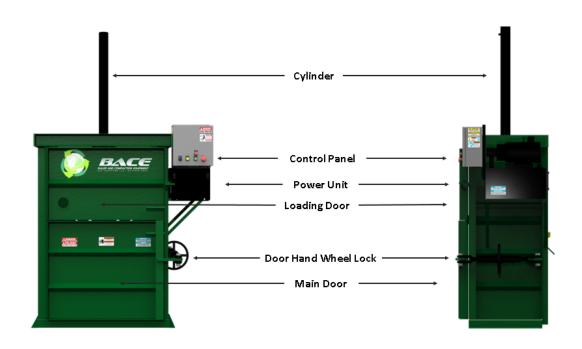
CAUTION

Ensure ejector chain(s) are removed from Press Head after bale has been ejected and before new material is placed in the Baling Chamber.













TROUBLESHOOTING GUIDE

NOTE: ONLY FACTORY AUTHORIZED SERVICE REPRESENTATIVES SHOULD MAKE ADJUSTMENTS OUTSIDE THE SCOPE OF THIS MANUAL.

List below is a first check for a qualified technician



CAUTION

Before performing any maintenance, always "LOCK AND TAG OUT THE

MOTOR WILL NOT OPERATE:

Check fused disconnect.

Check motor starter thermal overloads. Reset if necessary.

Check motor starter coil.

Check that safety gate switch is working properly.

Check that main chamber door is fully closed.

MOTOR RUNS BUT PLATEN DOES NOT MOVE

Check for proper motor rotation. (clockwise from the fan end)

Check the directional valve for proper operation.

Check the pressure switch.

Check the relief valve for proper adjustment.

Check the hydraulic fluid level. (Some may have Optional Low Oil Light)

BALE WEIGHTS ARE LOW

Check for proper system pressure.

Check for proper relief valve adjustment.

Check for proper pressure switch adjustment.

Check that baler is achieving full bale status. See "Operating Instructions."

BALE SHIFTS ERRATICALLY

Check for proper system pressure.

Check for proper pressure switch adjustment

Check relays and bases for signs or arcing.

Check directional valve.

BALER MAKES EXCESSIVE NOISE

Check hydraulic fluid level.

Check for water or air in hydraulic fluid.

Check oil filter and suction lines components for tightness.

Check that bolts are tight on press head UHMW wear guides.

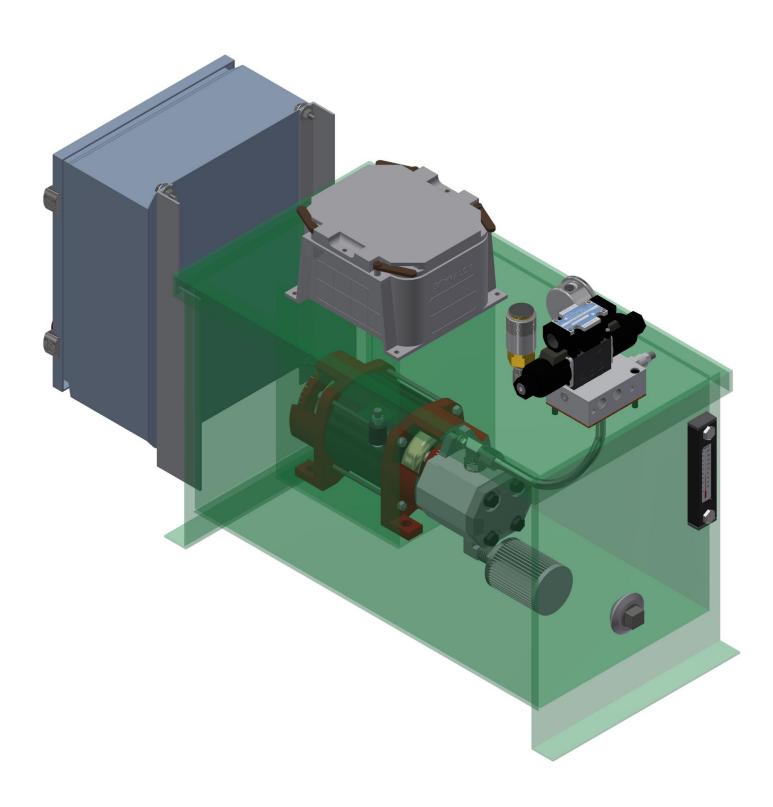




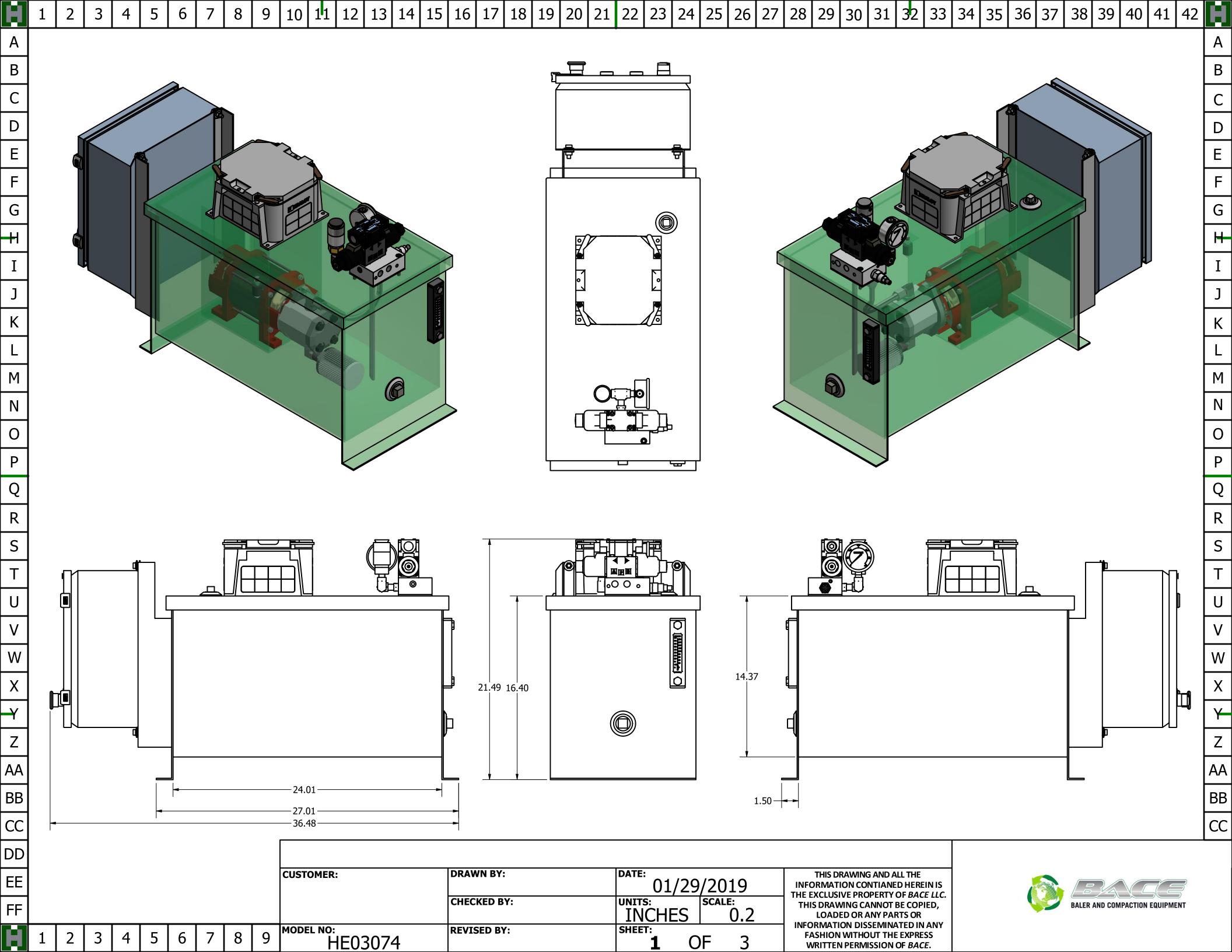
SCHEMATICS

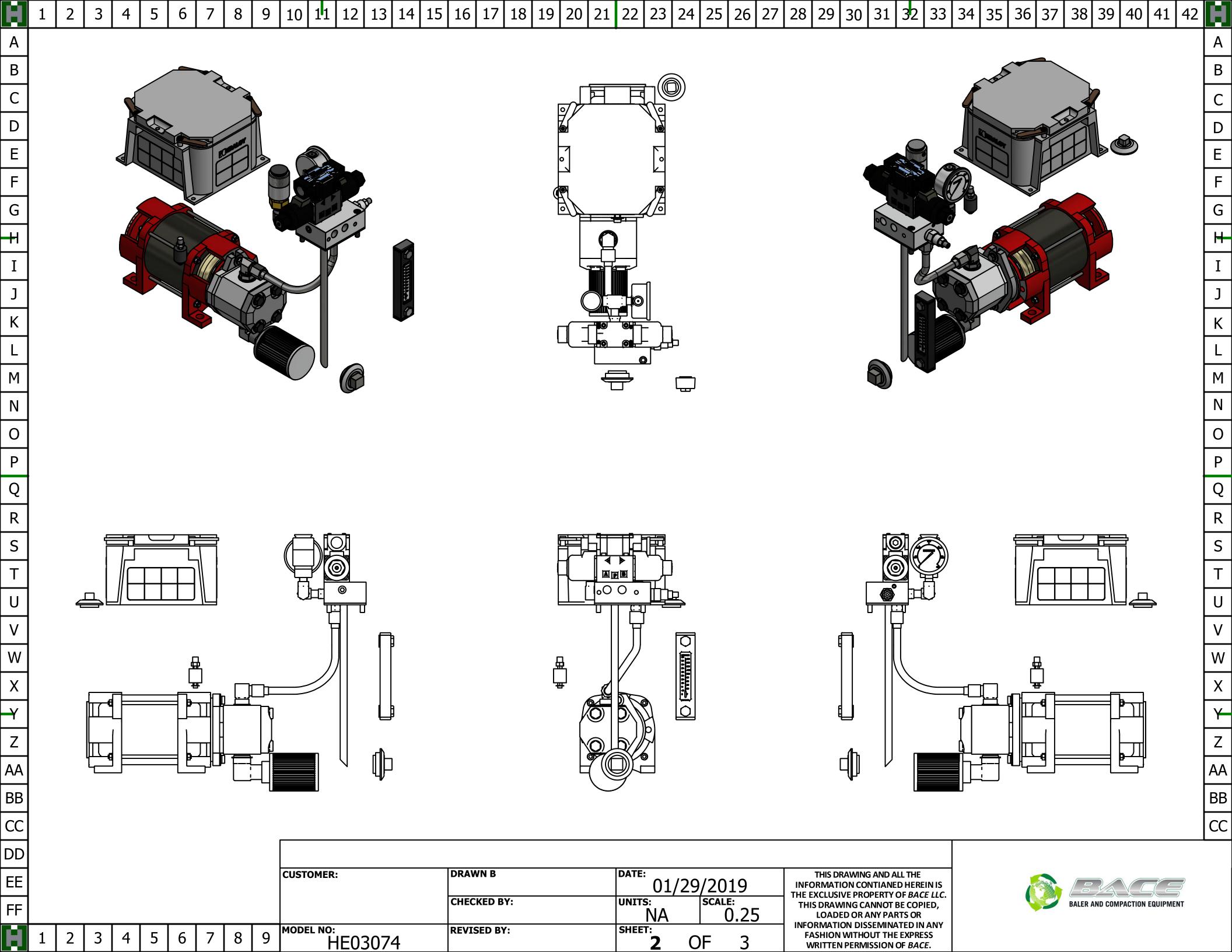
Schematics for the power units are contained inside the control panel of each baler. If additional schematics are required (including hydraulics) call the BACE offices.

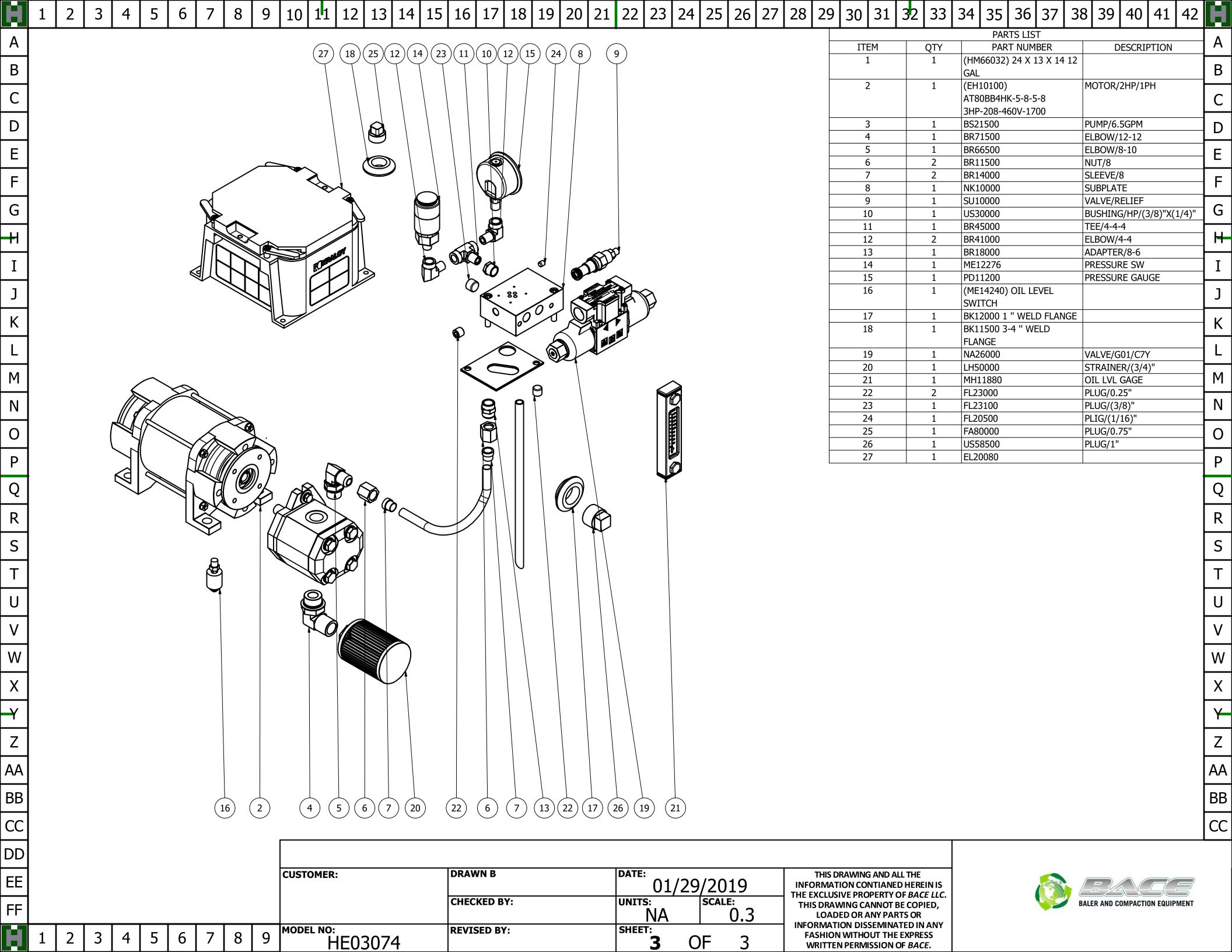
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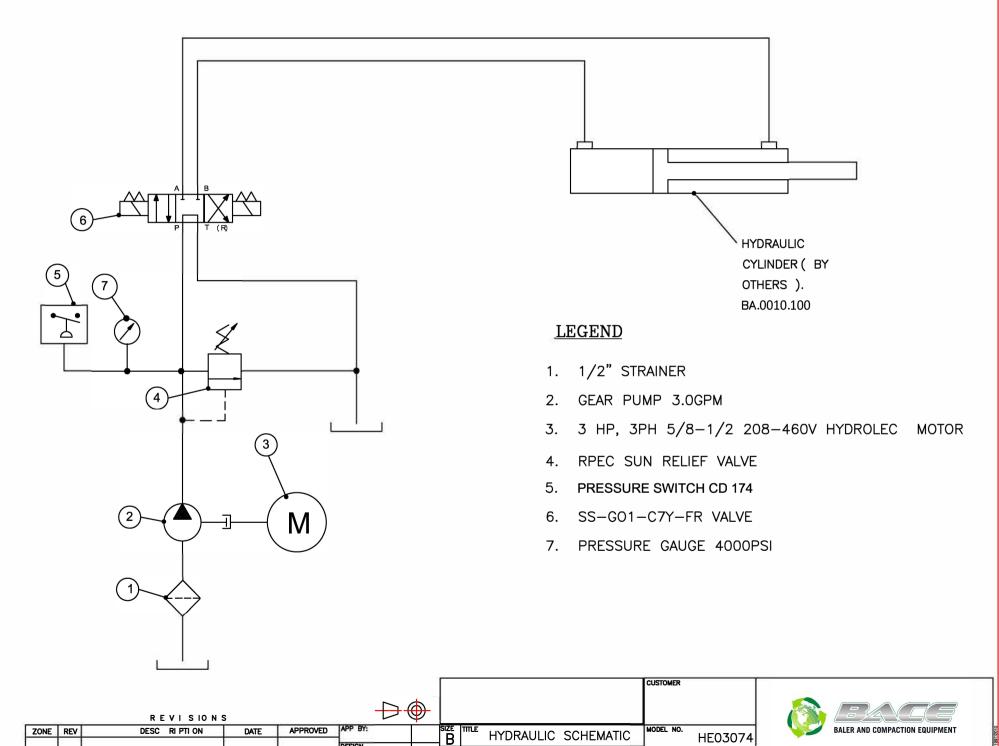




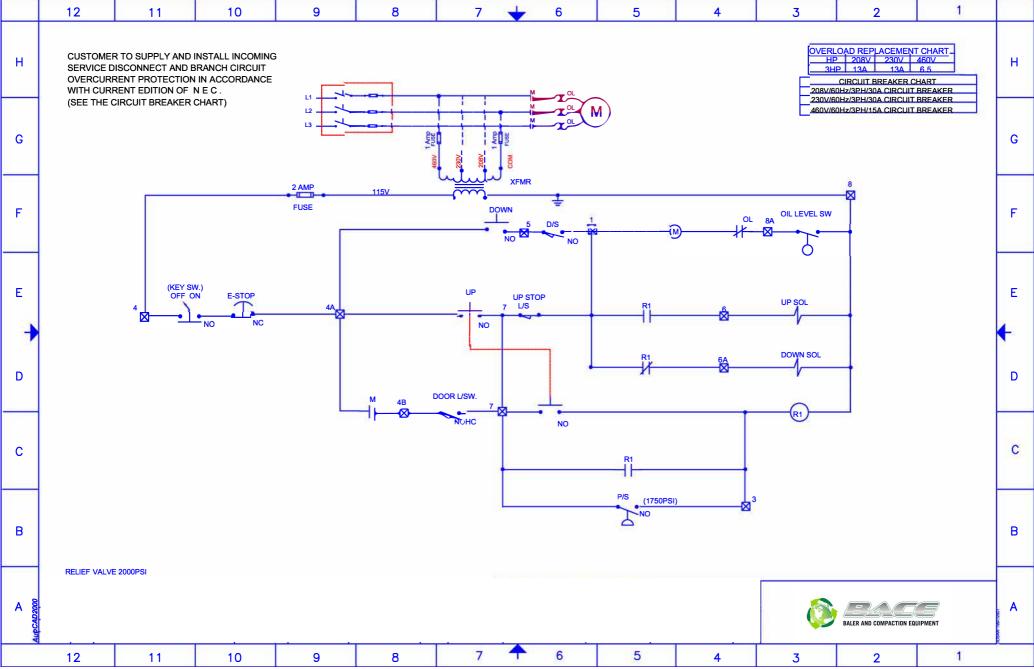




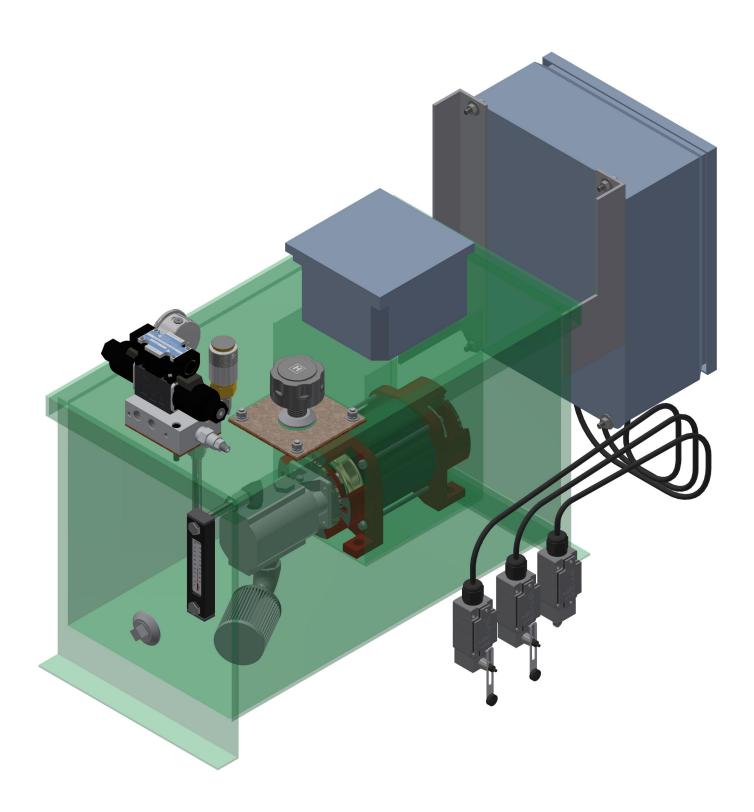




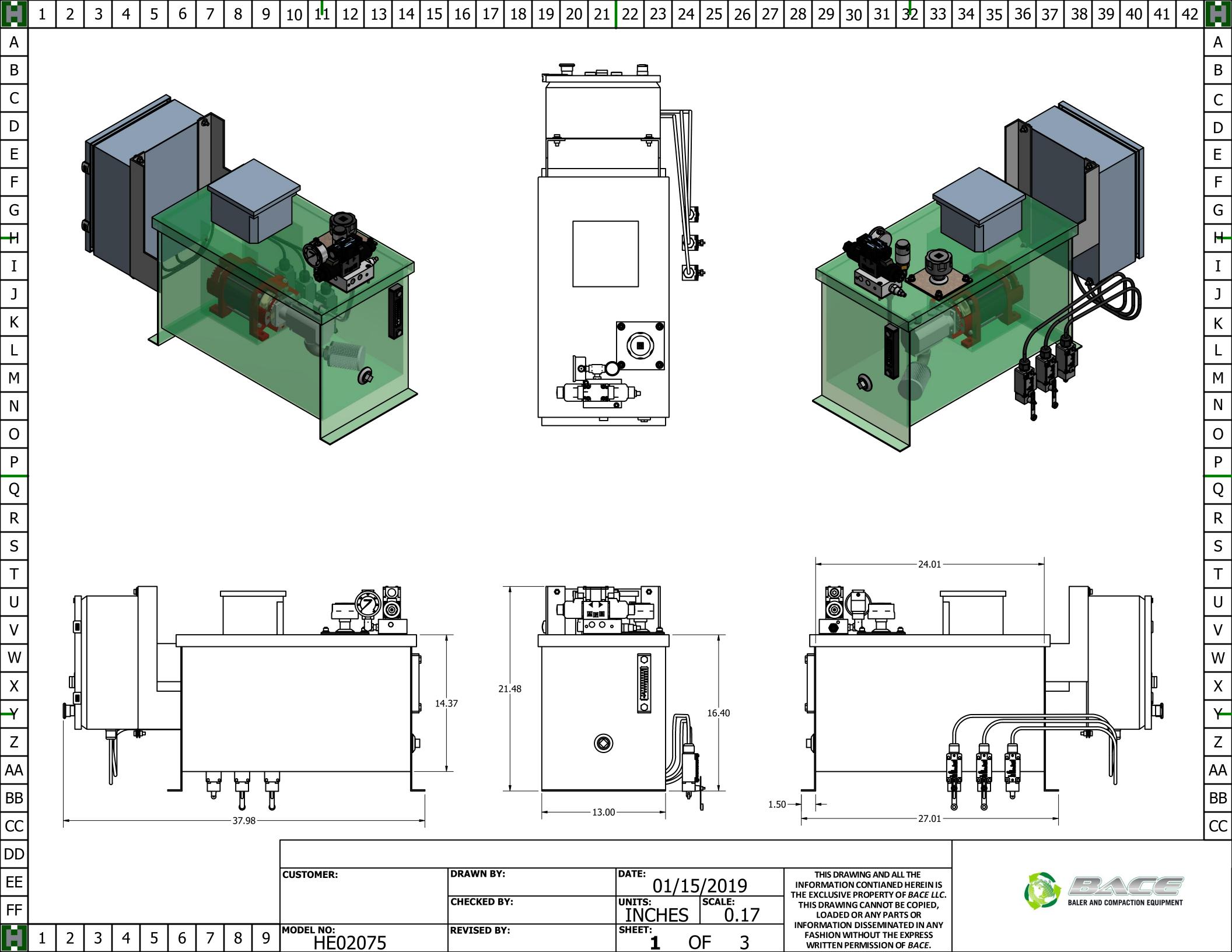
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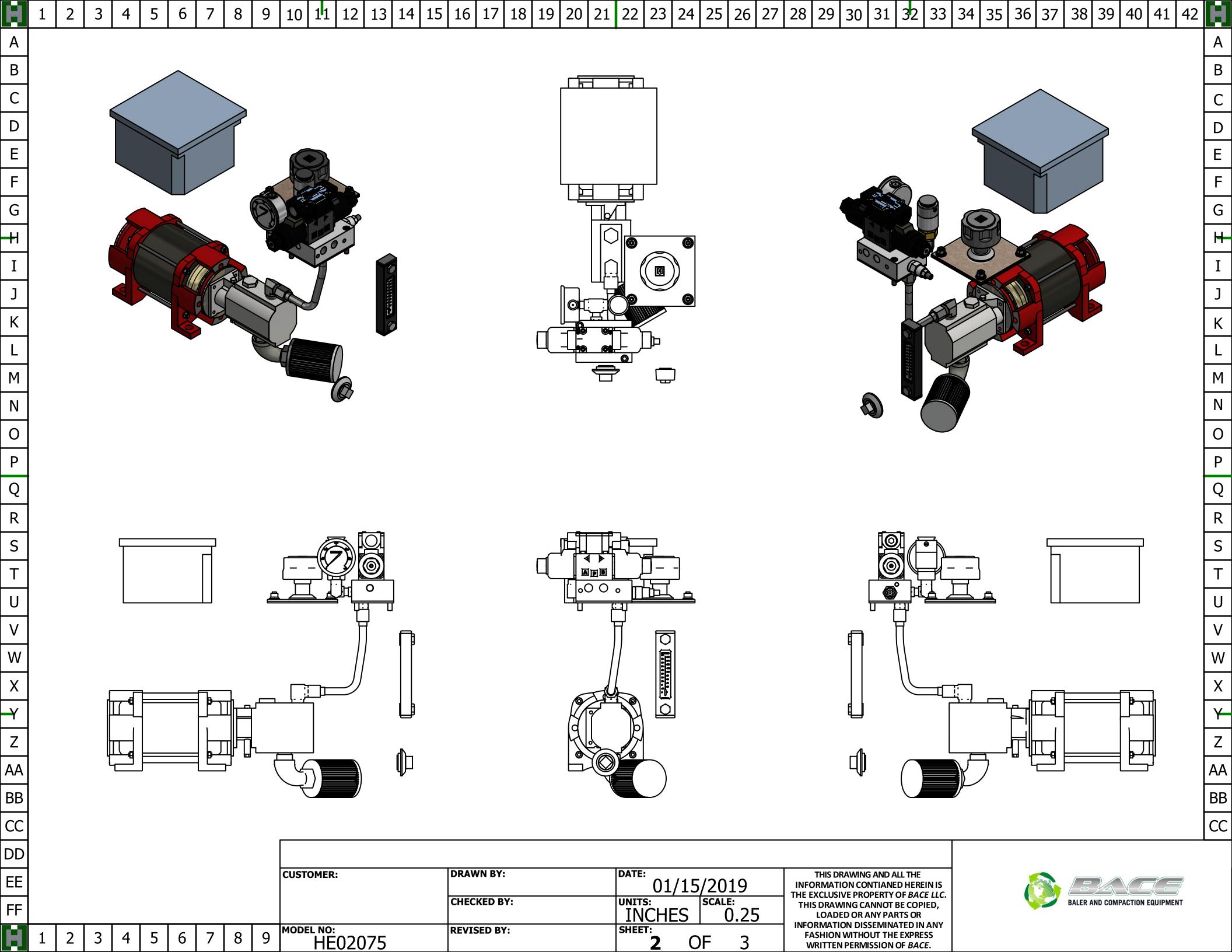


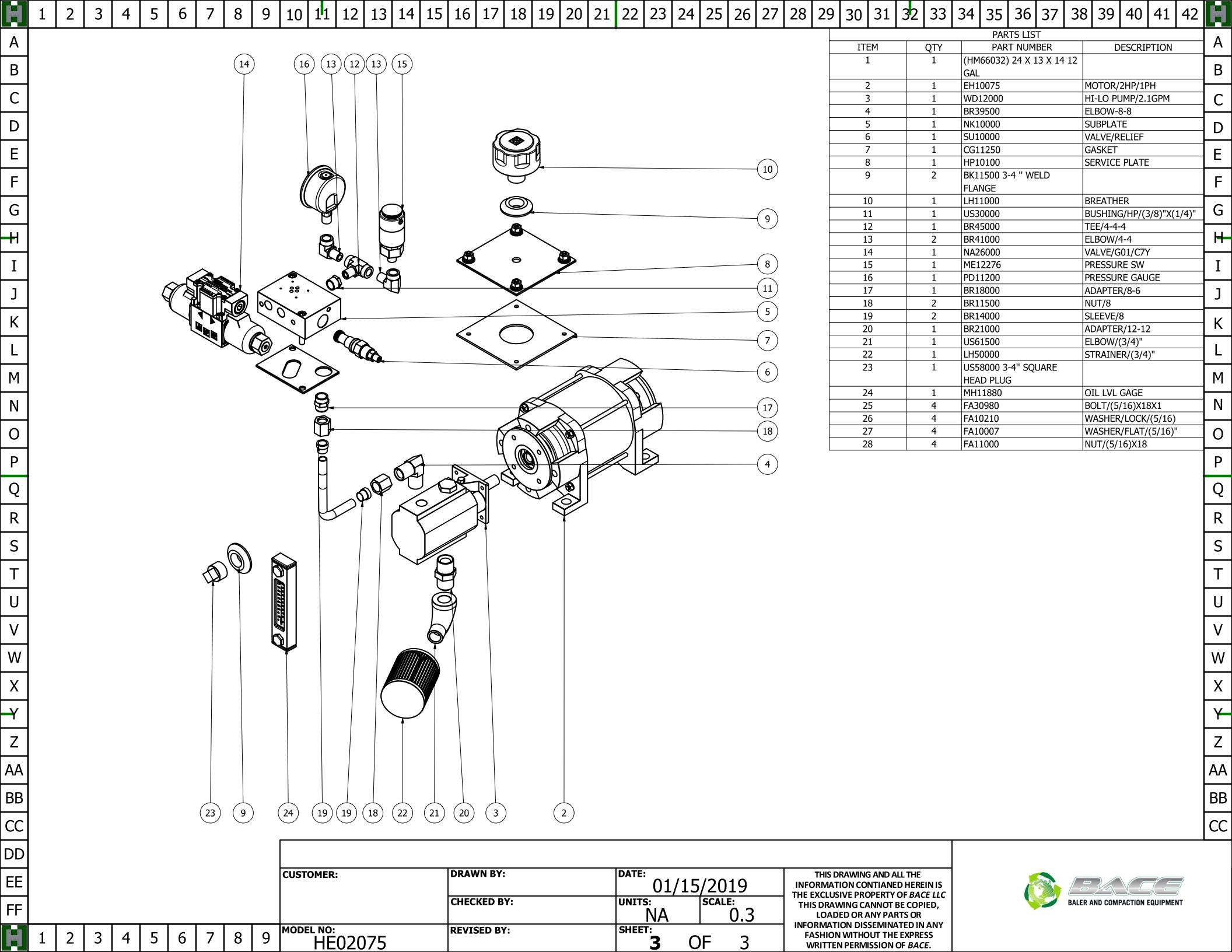
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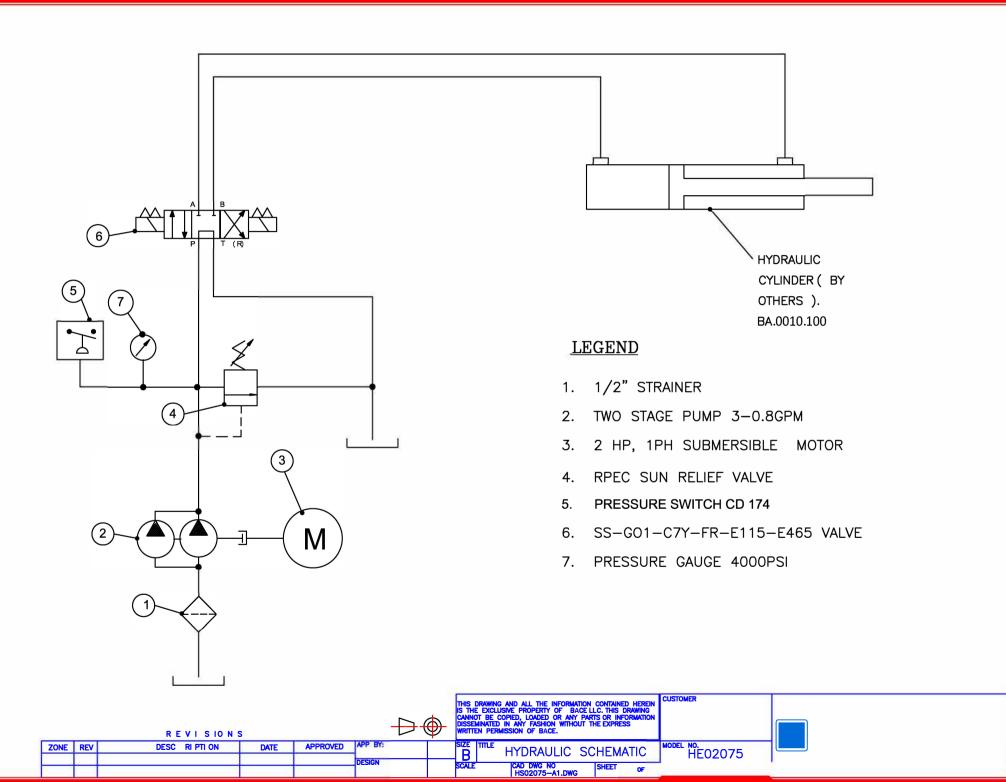


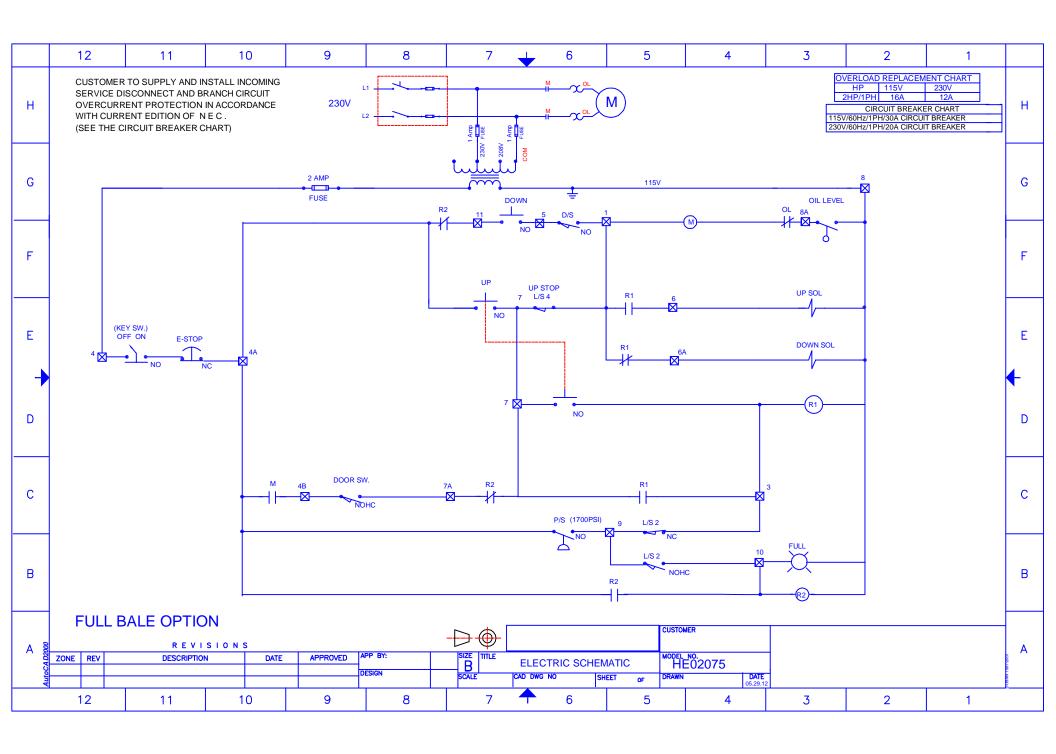
















Warranty Registration

Complete and mail to: BACE, LLC 322 West 32nd Street Charlotte, NC 28206

FORM MUST BE FILLED OUT AND MAILED WITHIN 14 DAYS OF INSTALLATION				
MODEL	SERIAL NUMBER	INSTALLATION DATE	PURCHASE DATE	PURCHASED FROM
Daniela dia a Canan		Contact	Name	
Purchasing Comp	any:	Contact	Name:	
A alalyses		City:	Char	7:
Address:		City:	Stat	:e: Zip:
Dl.	F	E-mail:		
Pnone:		E-mail:		
	S. II. and J. I. I. I.			
Installer Pre-L	Delivery Check List:			
Equipment must b	oe stored, installed and operat	ted in a dry environment unles	s optional nema 4 controls ar	e installed.
Fuse discon	nect and 12 ft. pigtail insta	lled		
	door (door open, baler sh		it bottom baler should sha	
		open safety gate and baler	should stop).	
,		, press the UP stop switch a	• •	
•	ectrical connections are tigl	·	1	
Check hydra	aulic level in sight glass.			
Check hydra	aulic hoses and fittings.			
☐ Ejector syste	em is ok.			
Baler is lagg	jed down.			
☐ Breather ca	p is installed.			
Safety deca	ls in place.			
Owner/Ope	erator has manuals, extra c	opies of electrical and hydra	aulic schematics and keys.	
Owner/Ope	rator has been properly tr	ained in the operation and	safety features.	
INSTALLER SIGN	ATURE:		DA1	ГЕ: