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BEFORE YOU START

This manual covers the application, installation, and maintenance of the new casted pressure foot, supplied by AXYZ Automation.

In order to obtain a safe, dependable, efficient operation and long life of the cast pressure foot, the instructions located in this manual must be read, understood, and followed thoroughly.

WARNING

Failure to comply with safety standards and/or manual procedures can result in personal injury, damage to shop personnel, the product and/or the equipment.

The owner is advised to maintain a record of all service work performed with the date and description of the type of work performed on the unit for future reference.

DISCLAIMER

This document is based on information available during the time of its publication. Efforts have been put into this manual to provide accurate information. This manual is NOT intended to cover all details or variations of the product nor is it to provide for every possible event relating to handling, installation, operation, and/or maintenance.

AXYZ International will not accept any responsibility or liability, in negligence or otherwise, for any loss or damage which may occur with the use of our products and/or information.

Information provided in this manual is to serve as an overview guide. Some features may be mentioned which are not present on all AXYZ International products.

SAFETY INFORMATION

Risks Specific to Maintenance

Maintenance should only be performed under maximum safety conditions.

- Ensure all fasteners are properly tightened or installed after removal.

Warning: Never:

- NEVER Start any maintenance before making absolutely sure that the tool in the spindle is completely stationary.
- NEVER Start any maintenance on the spindle before disconnecting it from the main power supply.
- NEVER Attempt to clean the spindle or any attachments while it is operating.

Risks Associated with Improper Use and Handling

- Avoid physical contact with any moving machinery.
- Take precautions to prevent accidental contact: avoid wearing loose or hanging clothing, tie back long hair, remove jewelry that could get caught in moving parts or cause electric shock.
- Wear protective gear such as safety glasses, hearing protection, etc. when in the vicinity of the operating spindle.
- Do not remove, modify or override safety devices or parts on the spindle.
- If safety guards or devices must be removed for any reason, ensure that they are properly installed and functioning before operation.
- Before starting the spindle ensure all safety devices are in proper working order.
- Loose fasteners can cause serious accidents. Ensure all fasteners are tightened and installed correctly.
- Do not attempt to repair or modify the spindle unless authorized to do so.
- Do not use the spindle to cut materials it is not specified for.

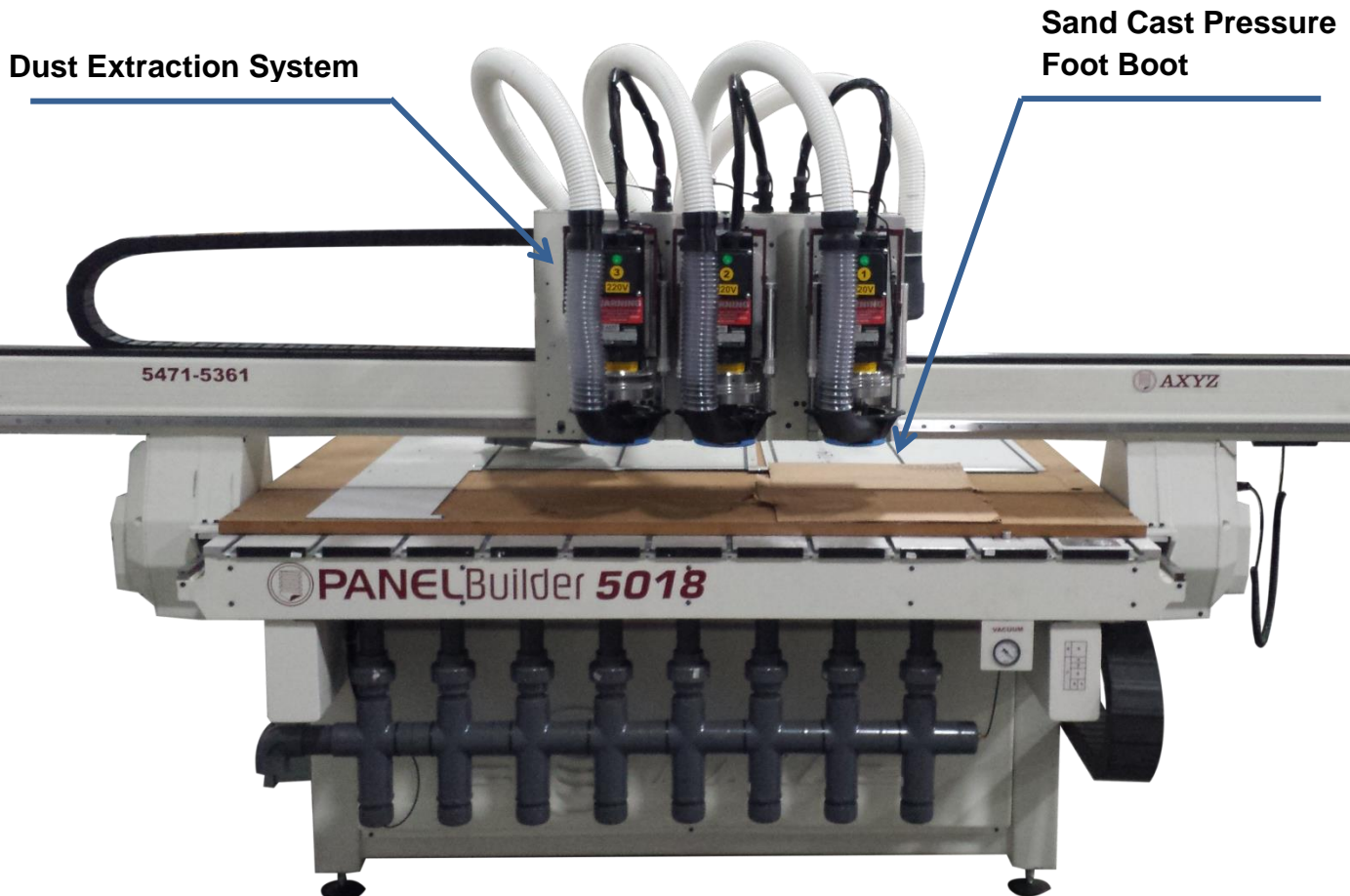
- Do not attempt to operate the spindle in an environment where there is risk of explosion.
- Use caution when handling tools. Some tools can be extremely sharp and should be removed prior to servicing the spindle.
- Beware of rotating parts even after the spindle is powered down.
- Perform all scheduled maintenance on the spindle. Failing to do so can lead to improper operation and increased wear.
- Do not remove warning labels or safety devices from the spindle and all other attachments. Ensure that all safety labels are legible and not obstructed from view

OVERVIEW

The cast pressure foot is a retrofittable option for the 3HP ELTE, 5HP ELTE, 10HP ELTE and HSD spindles. The new pressure foot design allows users to keep the functionality of the HC pressure foot, while eliminating issues related to the dust collection system. In addition, the new cast pressure foot provides customers with a more uniform and sleek looking design which is able to accommodate all optional attachments.

LOCATIONS

The cast pressure foot is located directly beneath the spindles. The dust extraction hose goes up and in front of the spindles and as a result, prevents the hose from conflicting with the various moving parts.



OPTIONAL (À LA CARTE) COMPONENTS

There are a few optional components for the Cast Pressure Foot, these include:

1) Universal Extraction Bracket (028174)



2) HSD mounting Bracket



3) VORTEX – Cold Air Gun (026234)



4) Nose Rider Collar (025595)



5) Bellow – Pressure Foot (028173)



6) Hose – 2.5” Clear Medium Duty – 12” (028192)



CHECKING THE STATUS

In order to get maximum performance from the cast pressure foot, XYZ Automation recommends a maintenance schedule that ranges from **three (3)** months to **six (6)** months. The schedule will vary from table to table, according to the material being cut and the frequency of usage.

The following checks and tasks should be completed during maintenance periods:

Check: Ventilation Blockage

- The nose of the cast pressure foot boot (hose connection point) should be cleaned to prevent blockage inside the pressure foot boot.

Check: Hose Damage / Hose Blockage

- The clear hose should be cleaned and inspected for wear and tear. If damage is evident, the hose should be considered for replacement.

Check: Pneumatic Cylinders

- Checks should be performed to ensure the pneumatic cylinders travel the full stroke of length.
- Both cylinders should be performing in sync with respect to one another.

Check: Flush Contact

- Ensure flush contact is made between all individual components in the cast pressure foot assembly.

INSTALLATION

WARNING

Under **NO** circumstances should the following procedures be performed while the machine is being operated. Doing so could result in serious injury and/or damage. In addition, it is strongly advised that all procedures which require tightening or loosening of bolts be performed manually using the appropriate tools.

1. Mounting Cast Pressure Foot Assembly

Notice

Please ensure all required optional components are installed prior to mounting the Cast Pressure Foot assembly on the carriage.

- 1) Begin by ensuring that the space between the two square blocks and the back plate of the mounting assembly is larger than 0.5" (thickness of the Z-plate).



- 2) Press the head of the screw towards the back plate of the mounting assembly. This is to keep the distance set in the previous step constant, allowing for easier installation.



- 3) Locate the two small slots on the bottom of the Z-plate. This is where the threaded portion of the screw is going to be located.



- 4) Carefully place the assembly under the Z-plate and align the screws with the U-slot. Gently push upward until flush contact is made between the bottom of the Z-plate and the mounting hub.



- 5) Continue using one hand to apply upward pressure on the assembly to ensure flush contact with the Z-plate. Use an Allen key of the appropriate size to thoroughly tighten the two screws.



2.Preparing Extraction Brackets

- 1) Begin by obtaining a 2.5" diameter clear hose that has a length of approximately 12" (this will vary from spindle to spindle).



- 2) Twist one end of the hose into the bottom of the extraction bracket. Continue twisting until the hose starts 'locking' into the extraction bracket.

3HP, 5HP, 10HP ELTE Bracket



3.Installing Extraction Brackets

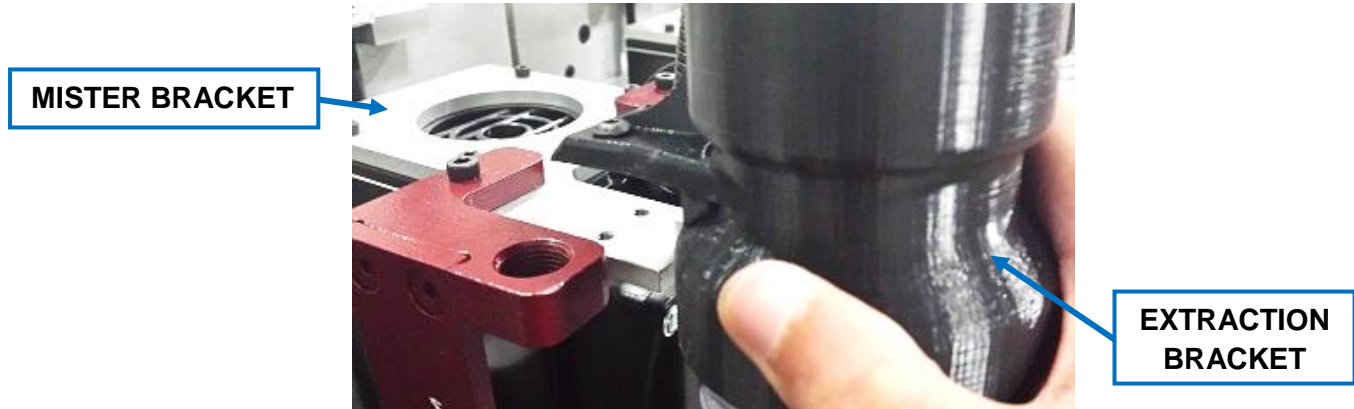
i. 3HP, 5HP and 10HP ELTE Spindle

The design of the extraction bracket is universal, as a result, the same extraction bracket can be used for the 3HP, 5HP, 10HP and HSD spindle.

Notice

Prior to mounting the extraction bracket to the mister bracket, it is highly recommended that the extraction bracket is first connected to the required hoses on both ends.

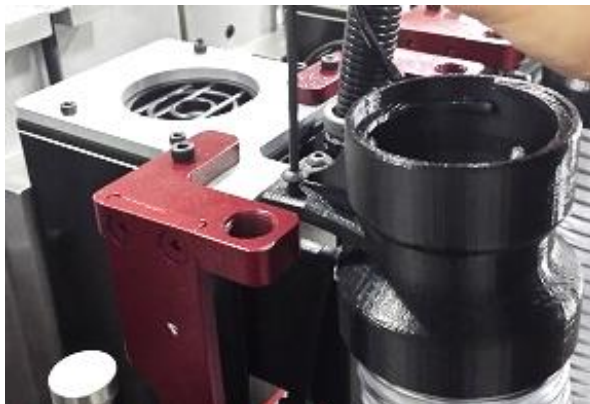
- 1) Place the extraction bracket on the mister bracket such that the chamfer is located on the top face, as shown in the image below.



- 2) Screw the extraction bracket to the mister bracket using two M5x16 button head screws and two M5 washers.

Notice

For clarity purposes, the manifold hose connection was not displayed in the image below. It is highly recommended to connect the 2" hose prior to mounting.

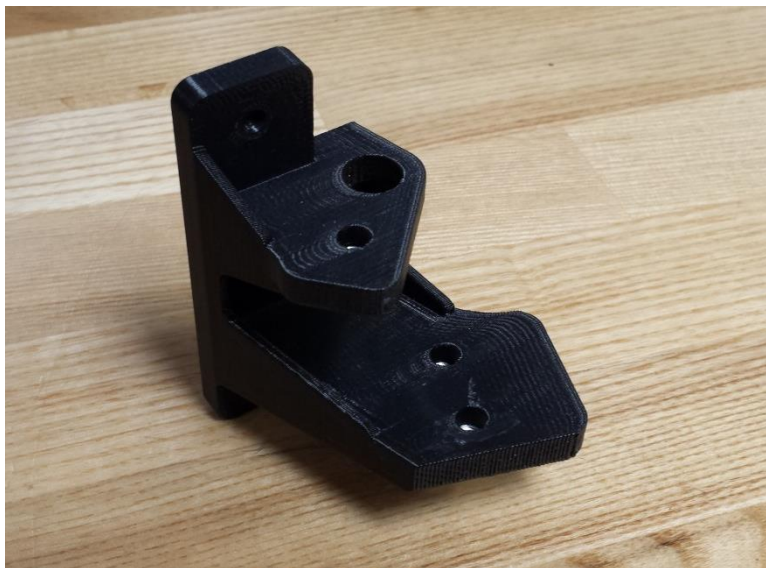


- 3) Complete the installation by sliding the hose on the nose of the cast pressure foot and tighten using a 2.5" clamp.



ii. HSD Spindle

As noted earlier, the extraction bracket used on the ELTE spindles is also used on the HSD spindle. The only variation is the type of mounting bracket being used. The HSD bracket looks like the image below:



- 1) Begin by obtaining three M5 hex nuts, and insert them into the slots shown in the image below:



- 2) Place the extraction bracket on the mounting bracket and tighten using two M5x20 BHCS, and two M5 flat washers, as shown.



- 3) Proceed to remove the two screws that are located on the HSD spindle, shown in the image below.



- 4) Place the HSD bracket on the spindle face. Screw and tighten to the spindle using two M4x16 socket head screws.



- 5) Complete the installation by sliding the hose on the nose of the Cast Pressure Foot and tighten using a 2.5" clamp.



INSTALLATION: OPTIONS

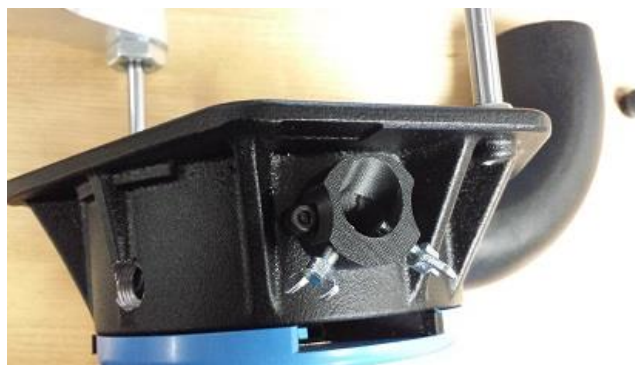
1. Mister Components

i. Mister Fixtures

- 1) If not already inserted, screw two thumb screws in the fixture as shown below.

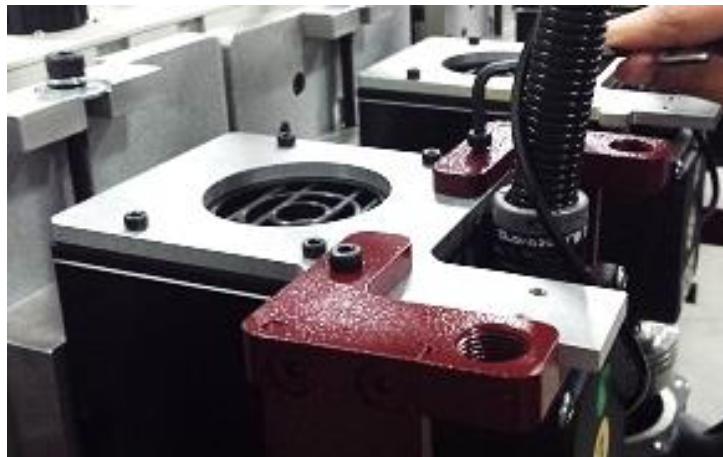
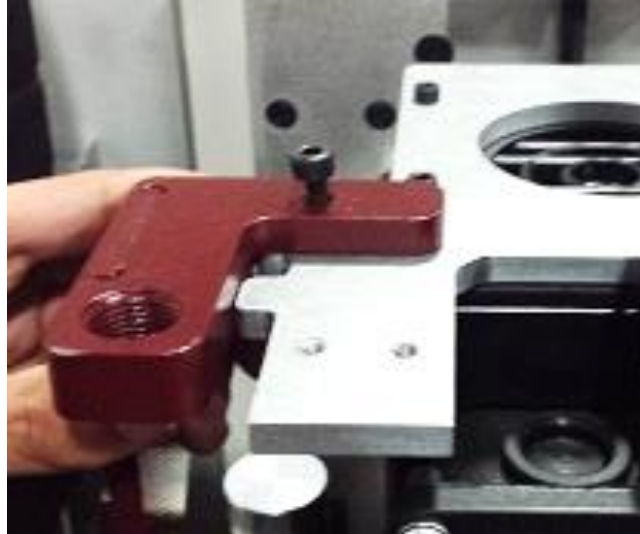


- 2) Place the curved face of the fixture on the Cast Pressure Foot, as shown below. The fixture should be oriented such that the two thumb screws are facing downwards, as shown in the image below. Tighten using two M4x12 socket head screws.

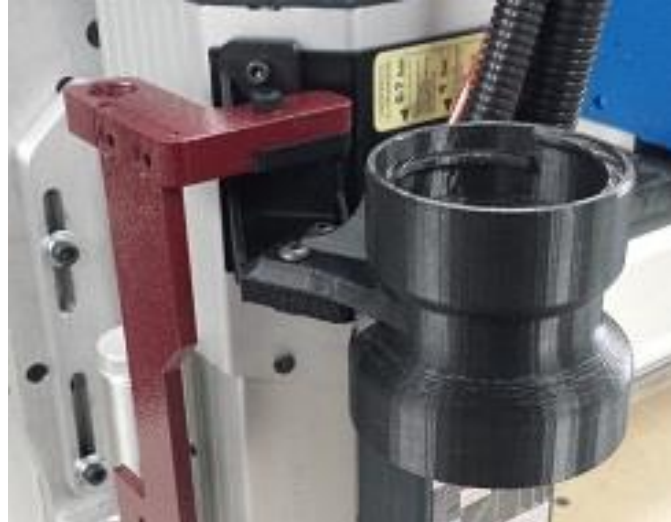


ii. Mister Arms

- 1) When working with the 3HP, 5HP, and 10HP ELTE spindles, place the mister arms as shown. This setup is universal for all ELTE spindles. Use one M5x12 BHCS per mister arm to tighten to the mister bracket.



- 2) Similarly, when working with the HSD spindle, the mister arm connects to the extraction bracket using one M5x16 SHCS and one M5 hex nut, as shown in the image below. The opposite end of the spindle requires an additional component in order to mount the mister arm.



2. Blue Glide Donut / Phenolic Donut

The following procedure is only required if a blue glide donut or a phenolic donut have not already been installed.

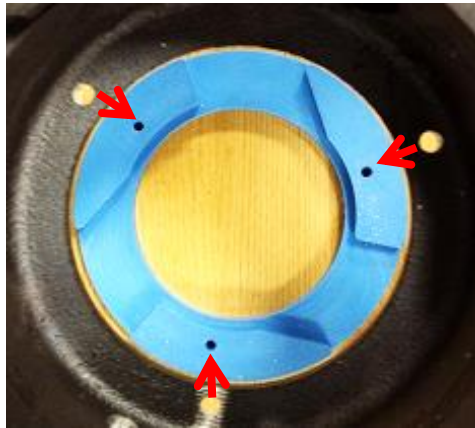
Notice

Both the blue glide donut and phenolic donut have the same installation procedure, as a result, the image below displays the blue glide donut, for the 5HP ELTE spindle setup.

- 1) Slide the blast gate into the donut as shown in the image below. Note the orientation of the blast gate.



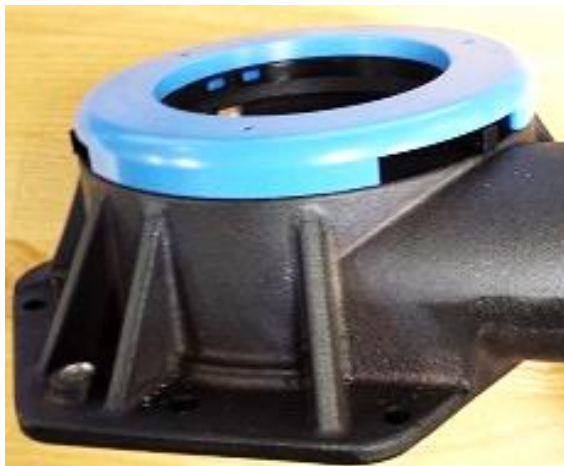
- 2) Align the three holes that were drilled onto the cast pressure feet with the three holes located on the donut



- 3) Place the three custom screws (8-16x5/8) on the inside of the Cast Pressure Foot and tighten using a screw driver to prevent stripping

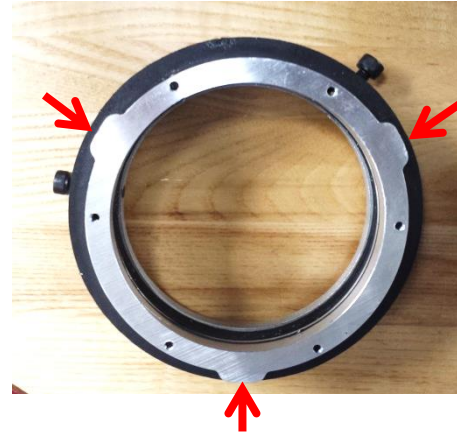
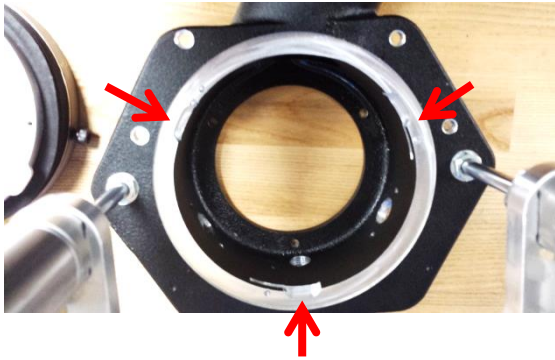


- 4) The following image shows the cast pressure foot after the donut and blast gate have been installed



3. Installing Modified Bellow Seal

- 1) Align the tabs on the bottom plate of the bellow seal with those on the Cast Pressure Foot, marked with red arrows in the drawings below.



- 2) Twist the bellow in a clockwise direction in order to lock it in place in the Cast Pressure Foot.

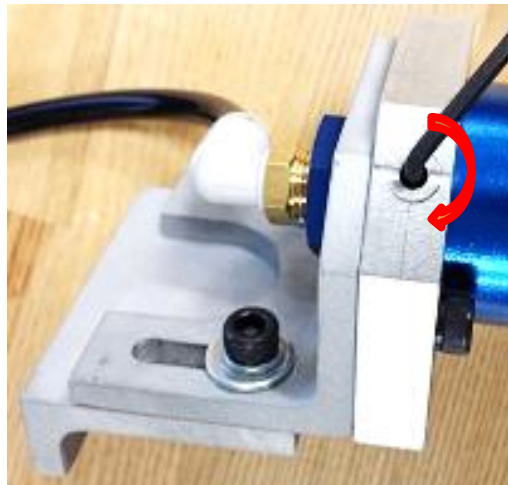


4. Installing Cold Air Gun

- 3) Obtain the cold gun mounting assembly. This assembly should contain three parts.

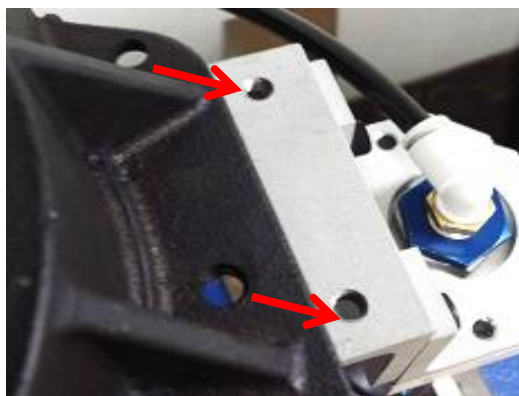


- 4) Slide the cold air gun into the mounting jig through the top (the face with the two socket head screws) and tighten the screws as shown. Repeat this step for the second screw.



- 5) Align the holes on the pressure foot and the cold air gun. The cold air gun mounting assembly rests on the top face of the cast pressure foot.

Notice: The cold air gun can be located on either end of the Cast Pressure Foot. The orientation depends on each individual table.



- 6) Tighten the cold air gun mounting assembly to the cast pressure foot through the underside of the Cast Pressure Foot using two M6 button head screws, as shown in the image below.



- 7) Wrap the tube around the back of the Cast Pressure Foot and screw the elbow fitting into the center tapped hole.



TESTING AND TROUBLESHOOTING

WARNING

Please ensure all power is turned OFF and all connections are disconnected prior to working with an already installed pressure foot. Failure to do so may result in severe injury or machine / tool damage

Before mounting the assembly, push the pressure foot base down and let go to see if the base comes back up. If it moves freely after all components have been securely tightened, then the assembly is ready to be installed to its respective machine.

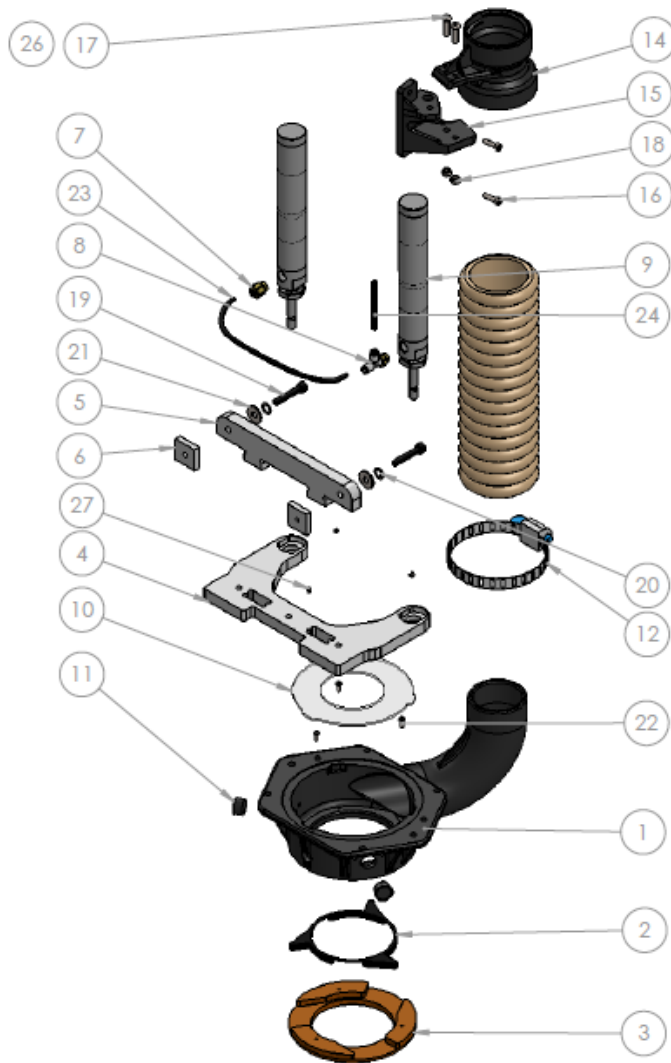
Notice

If none of the checks resolve the issue, please contact AXYZ customer service. Details can be found on the last page of this document.

Once installed, the following table provides a list of potential issue(s) and their respective checks.

| Issue | Checks | Potential Solution(s) |
|---|--|--|
| Pressure Foot Sitting Uneven on Surface | Pneumatic cylinders are not working in sync with respect to each other. | <ul style="list-style-type: none"> • Ensure the valve fittings are sealed correctly and properly tightened. • Ensure all wires are securely connected and flush with the valve fittings. |
| | Both pneumatic air cylinders are not performing the full length of the stroke. | <ul style="list-style-type: none"> • Ensure flush contact is made between air cylinder and mounting hub. • Replace the air cylinder(s). |
| | Both pneumatic air cylinders are screwed an unequal distance into the cast pressure foot | <ul style="list-style-type: none"> • Screw each of the air cylinders using an equal amount of rotations. • Ensure each hole is tapped an equal amount. |
| | Surface of the cast pressure foot is not equally leveled. | <ul style="list-style-type: none"> • Determine whether the surface can be re-machined. • Obtain a new cast pressure foot. |
| | Flush contact does not exist between various components. | <ul style="list-style-type: none"> • Ensure all debris is cleared between contacting surfaces. • Thoroughly tighten all connecting screws to ensure a snug fit. |



#028088 - PRESSURE FOOT - UNIVERSAL MODEL



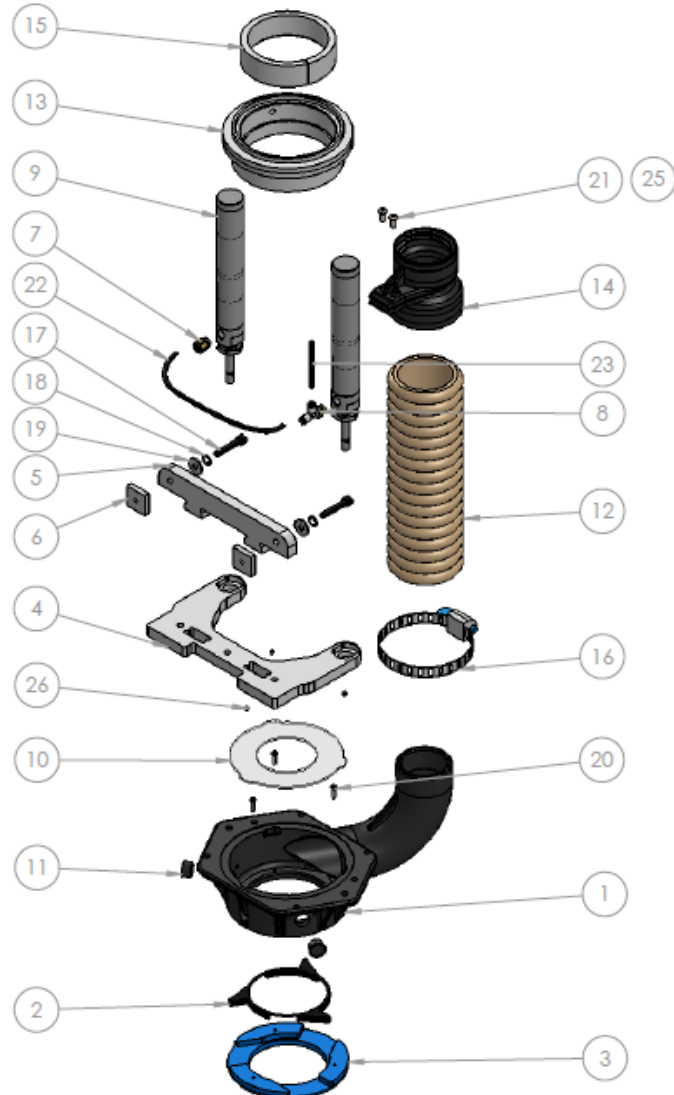
Note: Please order parts by "PART NO." only

| PRESSURE FOOT - UNIVERSAL MODEL | | | |
|---------------------------------|------|---|----------|
| Ref. No. | Qty. | Description | Part No. |
| 1 | 1 | HIGH CAPACITY PRESSURE FOOT BOOT | 028048 |
| 2 | 1 | NYLON - BLAST GATE | 027767 |
| 3 | 1 | ACM PF PHENOLIC DONUT 3-1/4" | 027730 |
| 4 | 1 | ALU1/2 - PDS/HC PF TOP PLATE | 025516 |
| 5 | 1 | ALU1/2-PDS/HC BACK PLATE | 025517 |
| 6 | 2 | STEEL SQUARE NUT ACM | 025533 |
| 7 | 1 | PNEU - STRAIGHT FITTING TUBE x 1/8" PT | 026755 |
| 8 | 1 | PNEU - MALE RUN TEE 1/8" PT x 4MM x 4MM | 026748 |
| 9 | 2 | PNEU - CYLINDER NCMB106-0250T | 024874 |
| 10 | 1 | LXN3MM - CAST PRESSURE FOOT COVER | 028065 |
| 11 | 3 | NYLON HOLE PLUG 0.625" | 027487 |
| 12 | 2 | HOSE CLAMP 2.5" | 027584 |
| 13 | 2 | HOSE - 2.5" CLEAR | 028192 |
| 14 | 1 | ABS - UNIVERSAL EXTRACTION BRACKET - PF | 028174 |
| 15 | 1 | ABS - HSD MOUNTING BRACKET - PF | 028351 |
| 16 | 2 | M4x16 SHCS | 028197 |
| 17 | 2 | M5x20 BHCS | 028452 |
| 18 | 3 | M5 HEX NUT | 028365 |
| 19 | 2 | M6 x 35 SHC SCREW | 028194 |
| 20 | 2 | M6 LOCK WASHER | 028096 |
| 21 | 2 | M6 FLAT WASHER | 028195 |
| 22 | 3 | PHIL PH 48-2 ZINC (8-16 x 5/8) | 028993 |
| 23 | 1 | 4x2.5 BLACK TUBE (9.75") | 020561 |
| 24 | 1 | 4x2.5 BLACK TUBE (56") | 020561 |
| 25 | 1 | BOX - CAST PRESSURE FOOT | 028193 |
| 26 | 2 | M5 FLAT WASHER | 028558 |
| 27 | 3 | M4x4 SET SCREW | 028989 |
| NS | 1 | M5x16 BHCS | 028364 |

NS: Note Shown

| | | | |
|--|--------------------|---|---|
| DRAWING FILE NAME CastPressureFootAssemblyDrawings\Feb2-2016\SLDASM | |  | |
| DESCRIPTION Pressure Foot - UNIVERSAL | | | |
| DESIGNED BY Osama Siddiqui | DATE 12/01/2016 | MATERIAL | WEIGHT kg |
| DRAWN BY Osama Siddiqui | DATE 12/01/2016 | W.O. NUMBER | PROJECTION |
| MODIFIED BY | DATE | PART ID 028088 |  |
| | | QUANTITY | |

#028129 - PRESSURE FOOT - ACM - NOSERIDER/BLUEDONUT




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| PRESSURE FOOT - ACM - NOSERIDER/BLUEDONUT | | | |
|---|------|---|----------|
| Ref. No. | Qty. | Description | Part No. |
| 1 | 1 | HIGH CAPACITY PRESSURE FOOT BOOT | 028048 |
| 2 | 1 | NYLON - BLAST GATE | 027767 |
| 3 | 1 | CAST TUBE - BLUE GLIDE DONUT | 027355 |
| 4 | 1 | ALU1/2 - PDS/HC PF TOP PLATE | 025516 |
| 5 | 1 | ALU1/2 - PDS/HC BACK PLATE | 025517 |
| 6 | 2 | STEEL SQUARE NUT ACM | 025533 |
| 7 | 1 | PNEU - STRAIGHT FITTING TUBE x 1/8" PT | 026755 |
| 8 | 1 | PNEU - MALE RUN TEE 1/8" PT x 4MM x 4MM | 026748 |
| 9 | 2 | PNEU - CYLINDER NCMB106-0250T | 024874 |
| 10 | 1 | LXN3MM - CAST PRESSURE FOOT COVER | 028065 |
| 11 | 3 | NYLON HOLE PLUG 0.625" | 027487 |
| 12 | 2 | HOSE - 2.5" CLEAR | 028192 |
| 13 | 1 | NOSE RIDER COLLAR | 025595 |
| 14 | 1 | ABS - UNIVERSAL EXTRACTION BRACKET - PF | 028174 |
| 15 | 1 | ALUM - 5HP ELTE REDUCER BUSHING | 025578 |
| 16 | 2 | HOSE CLAMP 2.5" | 027584 |
| 17 | 2 | M6 x 35 SHC SCREW | 028194 |
| 18 | 2 | M6 LOCK WASHER | 028096 |
| 19 | 2 | M6 FLAT WASHER | 028195 |
| 20 | 3 | PHIL PH 48-2 ZINC (8-16 x 5/8) | 028993 |
| 21 | 2 | M5x16 BHC SCREW | 028364 |
| 22 | 1 | 4x2.5 BLACK TUBE (9.75") | 020561 |
| 23 | 1 | 4x2.5 BLACK TUBE (56") | 020561 |
| 24 | 1 | BOX - CAST PRESSURE FOOT | 028193 |
| 25 | 2 | M5 FLAT WASHER | 028558 |
| 26 | 3 | M4x4 SET SCREW | 028989 |
| NS | 2 | M5x12 BHCS | 028196 |

NS: Note Shown

| | | | |
|---|--------------------|---|---|
| DRAWING FILE NAME CastPressureFootAssemblyCrevice(Feb20-2016) SLDASM | |  | |
| DESCRIPTION Pressure Foot - ACM | | | |
| DESIGNED BY Owena Siddiqui | DATE 12/01/2016 | MATERIAL | WEIGHT kg |
| DRAWN BY Owena Siddiqui | DATE 12/01/2016 | W. D. NUMBER | PROJECTION |
| MODIFIED BY | DATE | PART ID 028129 |  |
| | | QUANTITY | |

Note: Please order parts by "PART NO." only

PURCHASE INQUIRY AND CUSTOMER SERVICE

BURLINGTON OFFICE:

5330 South Service Road
Burlington, ON, L7L 5L1
Phone: 1-800-361-3408
Toll Free: 1-800-361-3408

CINCINNATI OFFICE:

2844 East Kemper Road
Cincinnati, OH, 45241
Phone: 513-771-7444
Toll Free: 1-800-527-9670

TELFORD OFFICE:

Telford 54 Business Park
Nedge Hill
Telford, England, TF3 3AL
Phone: 44-1952-291600

BANGLORE OFFICE:

Ground Floor, "RUKMINI PLAZA"
No. 1047, 20th Main, 5th Block, Rajajinagar
Bangalore, India, 560 010
Phone: 91-80-2314-6628

KATOWICE OFFICE:

Ul. Oswobodzenia 1
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