

NPK LLC

New Albany, OH 43054

Needles Plates Knives

1-614-716-9820 / 614-738-8208 / 614-738-8206

email: npkllc@aol.com www.npkusa2.com

Speco Bone Collector System

The Speco Bone Collector System literally removes foreign particles such as bone, sinew, gristle, dense plastics, metal, and all other undesirable particles from your product without any human interaction. No longer do mechanics have to disassemble grinders to clean out the uncollected waste left behind by other systems. The Speco BC System literally purges itself through the incorporation of Bone Collector channels in our BC Plate and Stud/Nut design.

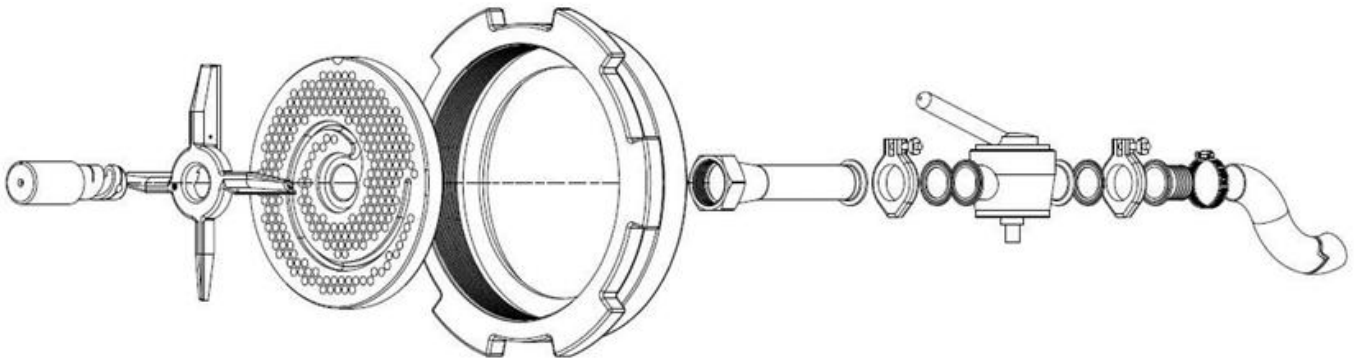
- For over 40 years Speco's Bone Collector System has been driving foreign particles out of both American and European grinders.
- It's one of the simplest and most widely used systems and it's adaptable to almost all grinders
- Its effectiveness and efficiency are so unrivaled that nearly all major processors depend upon it.

The effectiveness of our Bone Collector Plate comes from our patented Speco Bone Collector channel (groove). Since bone and foreign particles are naturally denser than the product, these particles will begin to move to the center auger. As the knife rotates against the plate, the foreign particles are captured into the channel (groove) and allowed to travel to the center of the plate.

Once in the center, it is then ejected through our specially designed Bone Collector Stud/Nut design. This stud looks like a large drill bit where it has a spiral channel milled along the shaft designed to auger the waste forward and through the hub of the plate.

The final component of the Speco Bone Collector System is a piping assembly, flex hose and/or ball valve, designed to help restrict the amount of exhaust being discharged from production. This hose will then allow processors to collect the waste in its own bin for either reworking or disposal.

Removing foreign particles from products has never been so easy. And with the Speco Bone Collector System, you'll never have to halt production again. Ask about the new Speco Bone Collector System today.



NPK LLC

New Albany, OH 43054

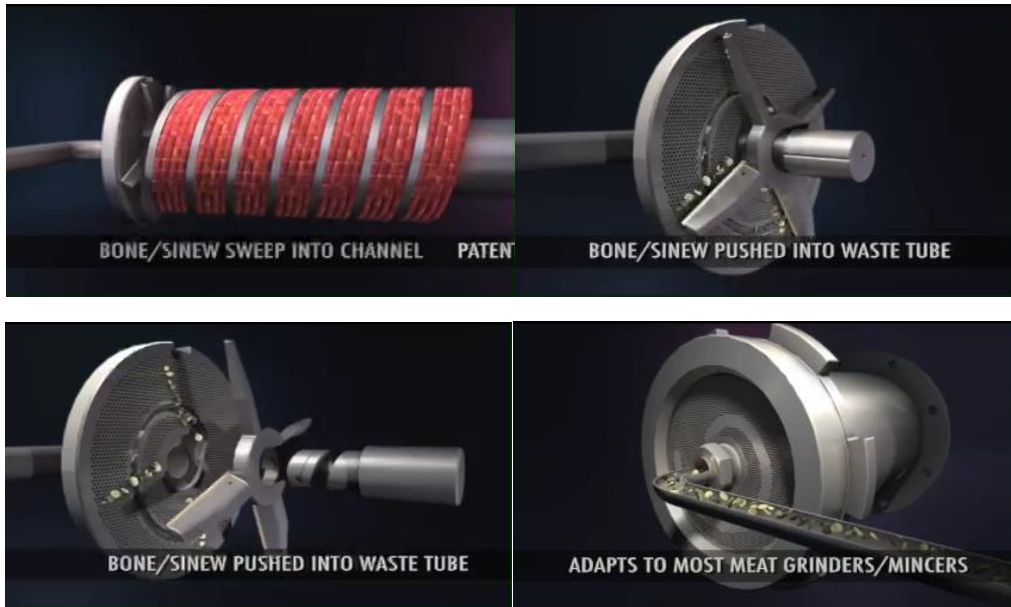
Needles Plates Knives

1-614-716-9820 / 614-738-8208 / 614-738-8206

email: npkllc@aol.com www.npkusa2.com

Click the below the link to see a video of the Speco Bone Collector in operation

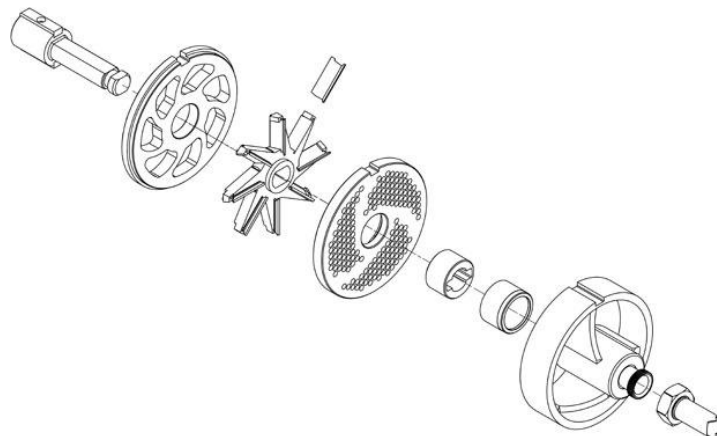
https://speco.com/media/videos/2023/11/20/video_bone_collector.mov



Meat products with Bone / Sinew enters the grinder, the Bone / Sinew collects into the grooves of the holeplate, the flows to the center of the holeplate and exits out of the waste tube. A percentage of Meat products (shown in red) will also follow the same path as the Bone/Sinew. The discharge rate can be regulated by opening or closing of the Ball Valve installed in the waste piping.

Below are diagrams for most of the Major Grinder manufacturers

C250 Wolfking / CFS / GEA Style Grinders



NPK LLC

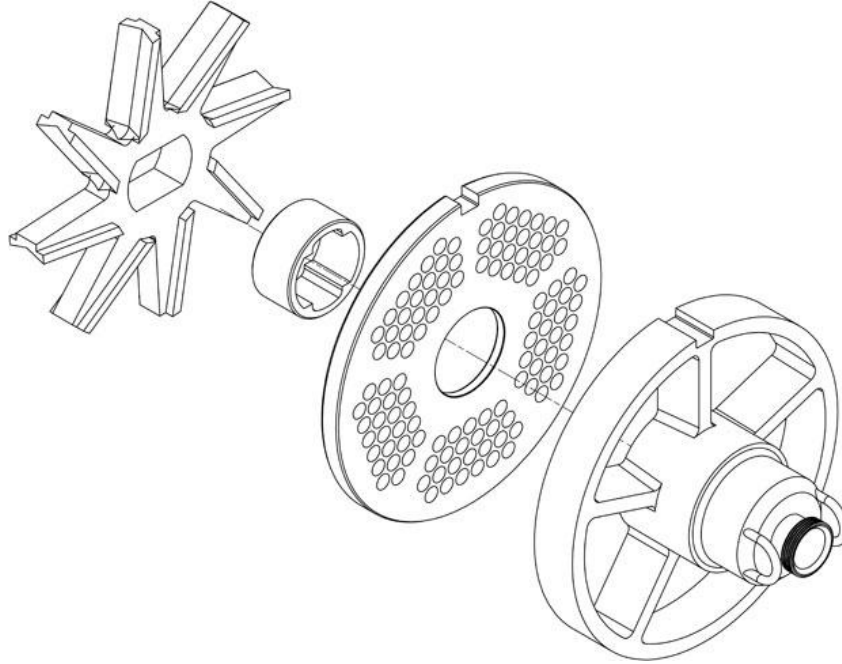
New Albany, OH 43054

1-614-716-9820 / 614-738-8208 / 614-738-8206

email: npkllc@aol.com www.npkusa2.com

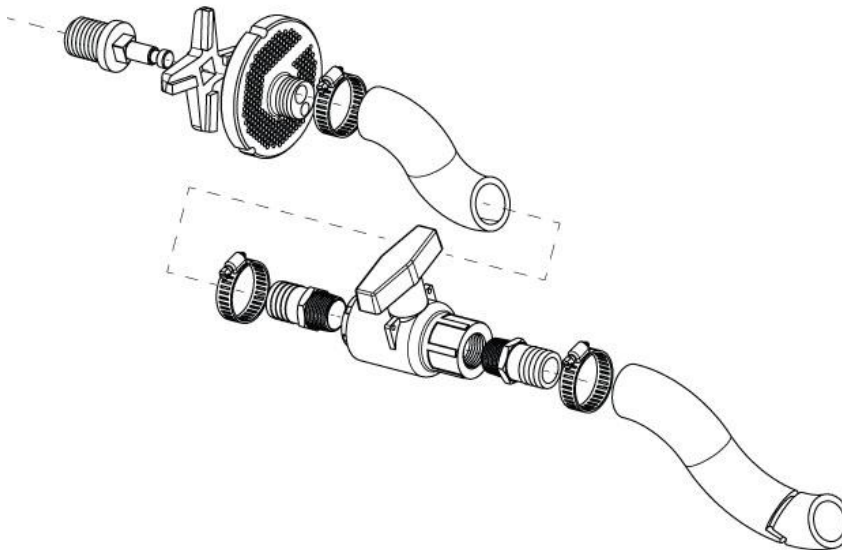
Needles Plates Knives

C400 Wolfking / CFS / GEA Style Grinders



Butcher Boy / Hollymatic / Biro / Berkel / Thompson / Stimpson / Toledo / Hobart

Speco 32 Bone Collector



NPK LLC

New Albany, OH 43054

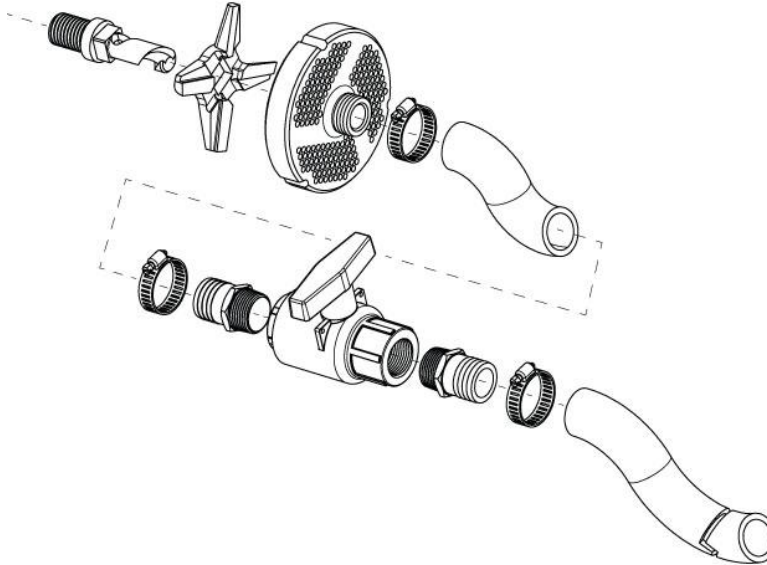
1-614-716-9820 / 614-738-8208 / 614-738-8206

email: npkllc@aol.com www.npkusa2.com

Needles Plates Knives

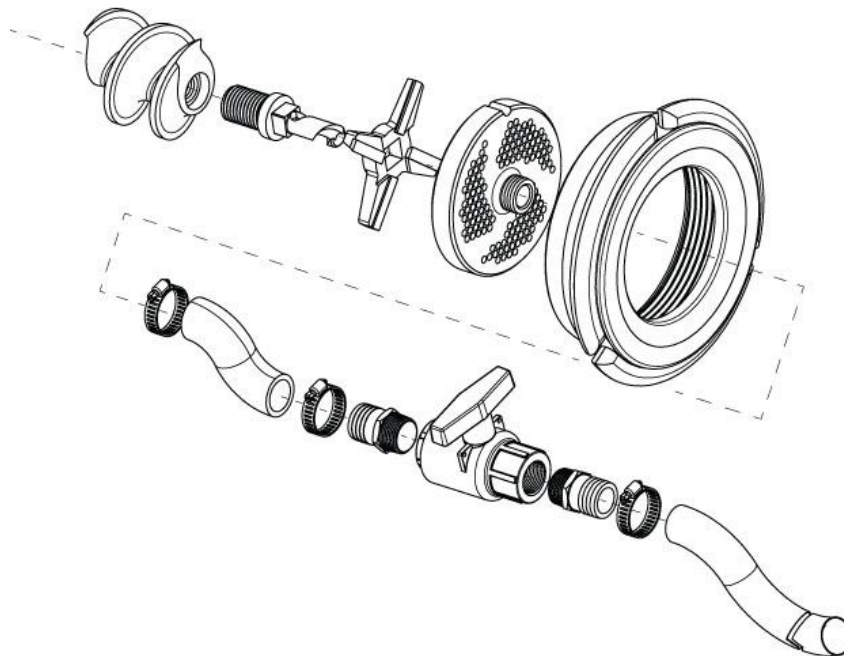
Butcher Boy / Hollymatic / Biro / Berkel / Thompson / Kolbe

Speco 52 Bone Collector



Butcher Boy / Hobart / Thompson / Buffalo / Biro / Hollymatic

Speco 56 Bone Collector



NPK LLC

New Albany, OH 43054

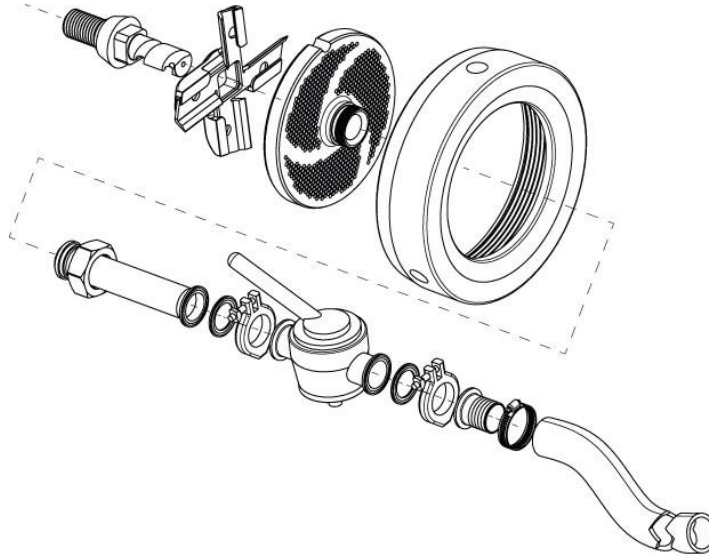
1-614-716-9820 / 614-738-8208 / 614-738-8206

email: npkllc@aol.com www.npkusa2.com

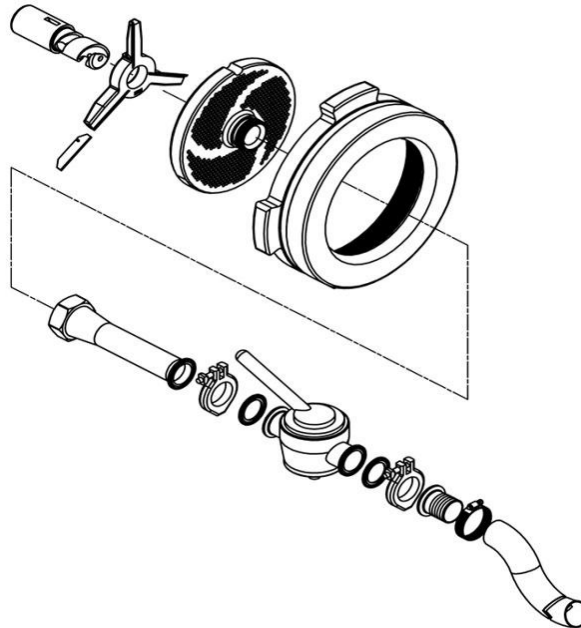
Needles Plates Knives

Butcher Boy / Thompson / Buffalo / Hobart / Anco

Speco 66 Bone Collector



Speco Bone Collector 8 Weiler



NPK LLC

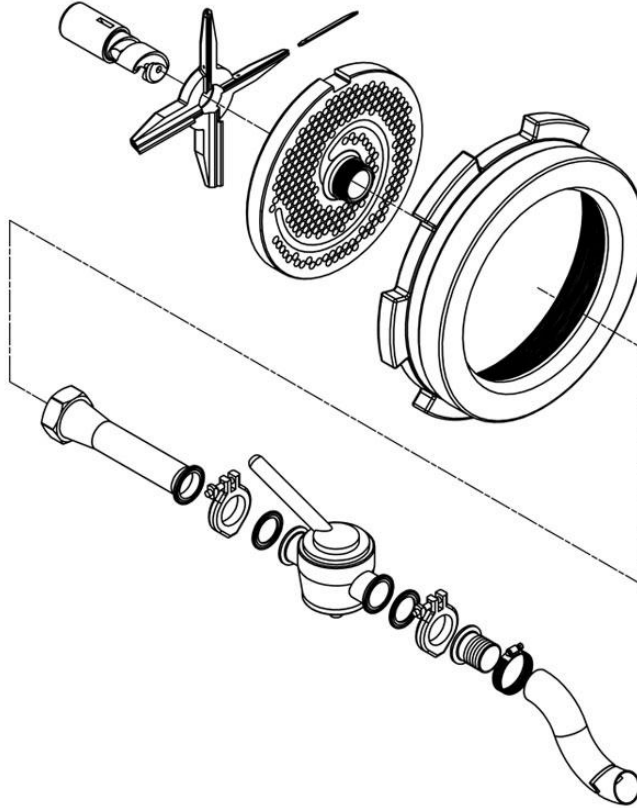
New Albany, OH 43054

1-614-716-9820 / 614-738-8208 / 614-738-8206

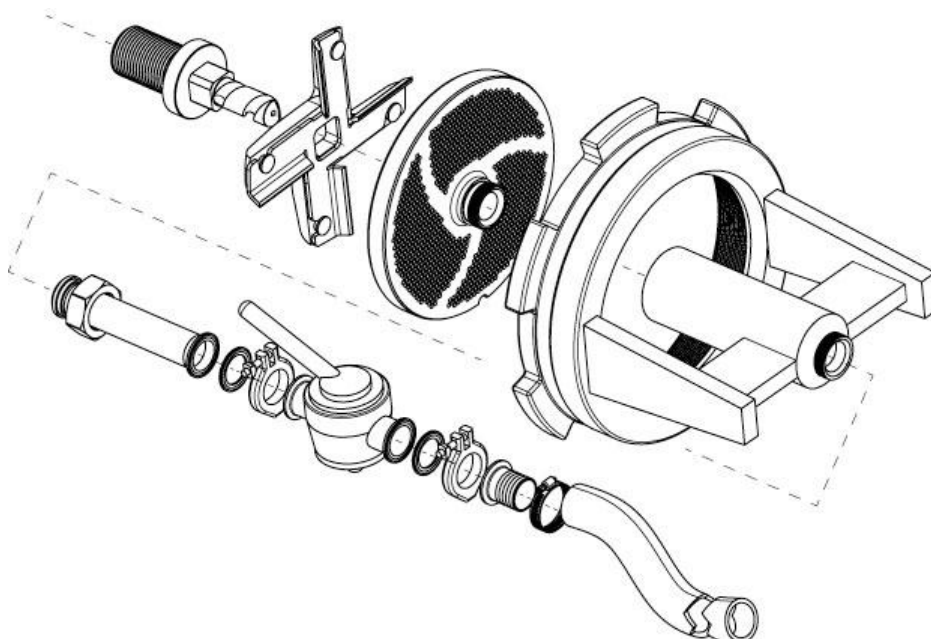
email: npkllc@aol.com www.npkusa2.com

Needles Plates Knives

Speco Bone Collector 11 Weiler



Speco Bone Collector 11 Enterprise



NPK LLC

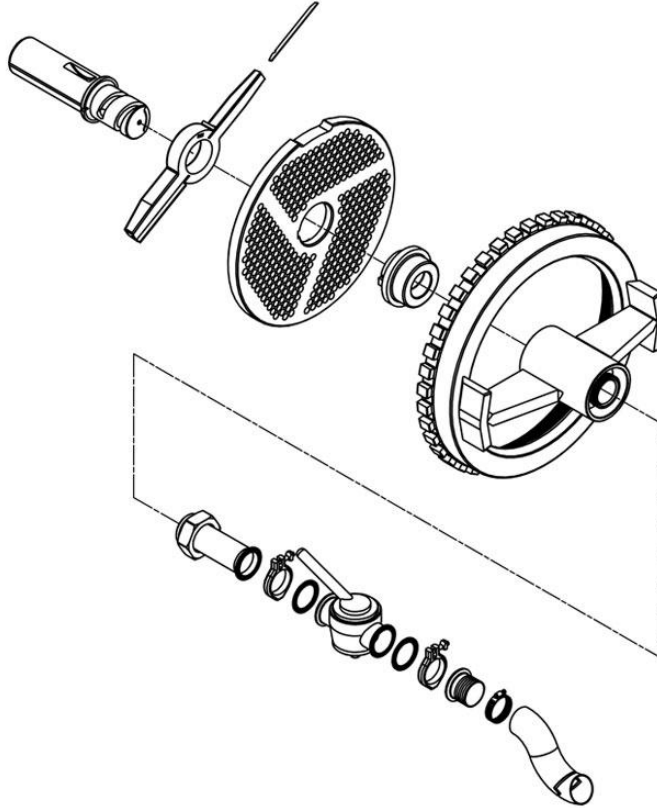
New Albany, OH 43054

1-614-716-9820 / 614-738-8208 / 614-738-8206

email: npkllc@aol.com www.npkusa2.com

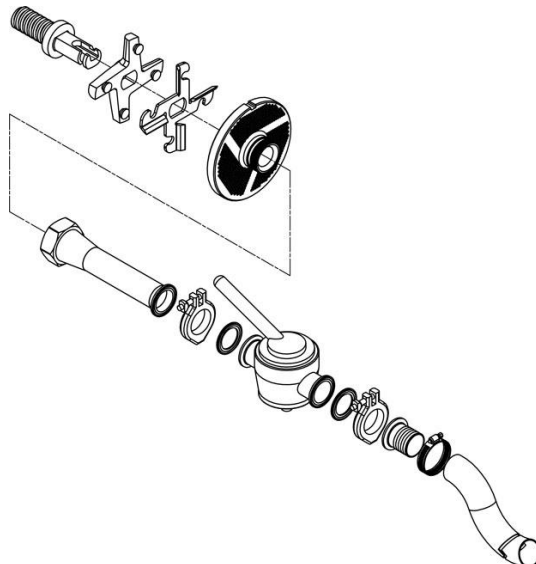
Needles Plates Knives

Speco Bone Collector 16 Weiler



Seydelmann / Risco

Speco Bone Collector 160



NPK LLC

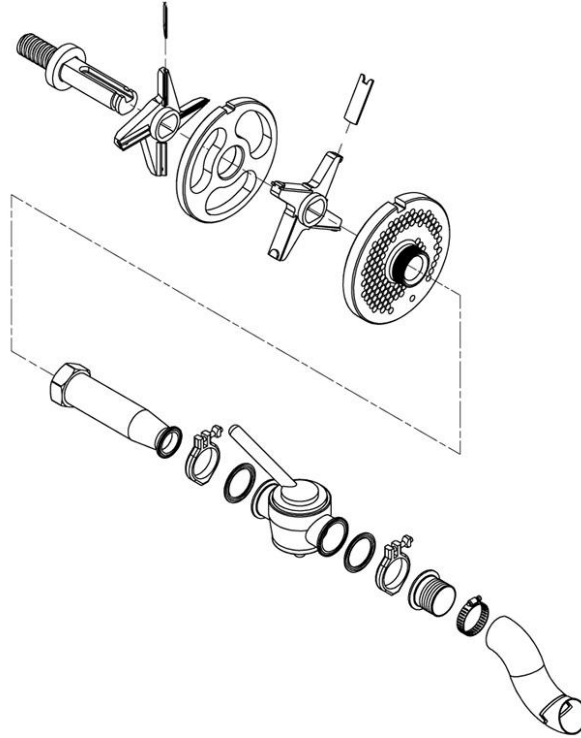
New Albany, OH 43054

1-614-716-9820 / 614-738-8208 / 614-738-8206

email: npkllc@aol.com www.npkusa2.com

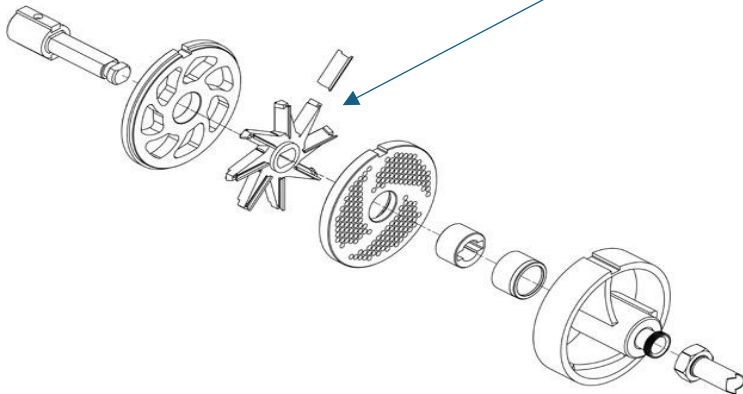
Needles Plates Knives

Speco Bone Collector 200



Speco Bone Collector 250

Requires a Speco Knife without a hub on one side, Speco BC Style Holeplate, Speco BC Pilot Nut and a Speco Style Pilot Bearing



NPK LLC

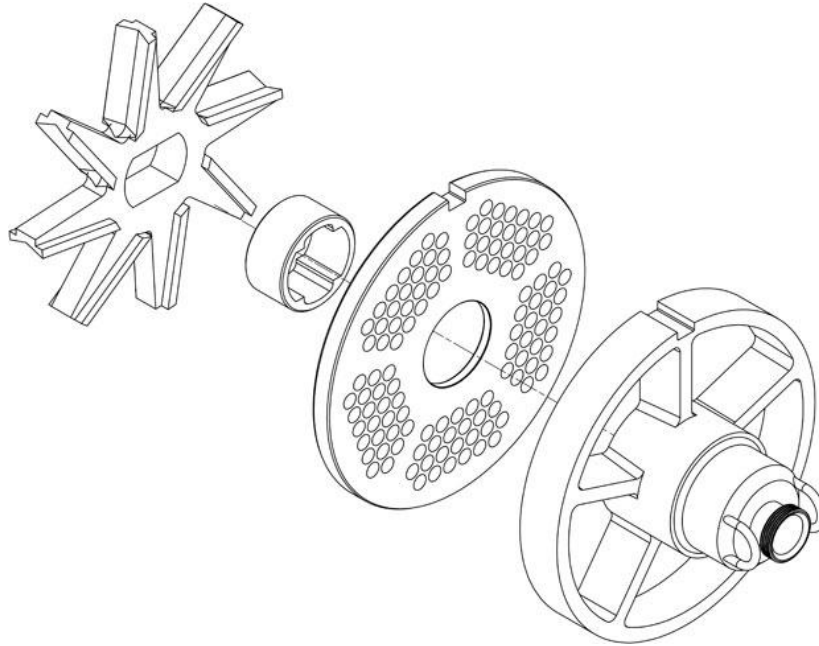
New Albany, OH 43054

Needles Plates Knives

1-614-716-9820 / 614-738-8208 / 614-738-8206

email: npkllc@aol.com www.npkusa2.com

Speco Bone Collector 400



Advantages of the Speco Bone Collector System

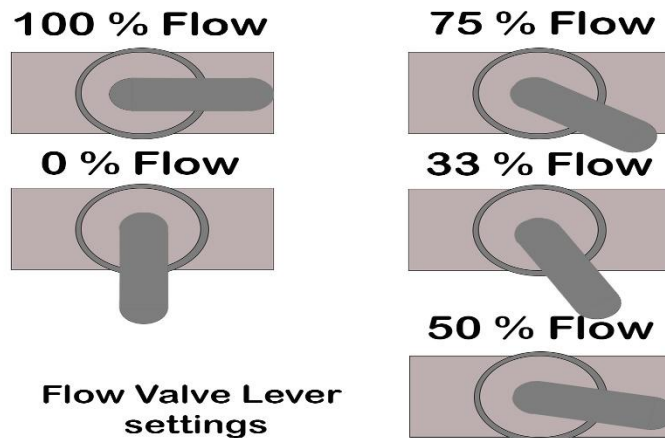
- Simpler Design to operate and understand
- Fewer parts required
- Less inventory of Spare Parts
- No Electrical Controls or requirements
- No Pneumatic Controls or requirements
- Less Technical skills required by operators
- Less Technical skills required by Maintenance Personnel
- Similar to Assemble and Dis-assemble
- Reduction in required Daily Start Up times
- Compatible with most all of the major Grinder Manufactures
- Reject rate can be easily adjusted by adjusting the flow rate

Requirements to add or exchange to a Speco Bone Collector

- Requires the use of a Speco style holeplate with the channel discharge grooves
- Requires a Speco style Knife for some grinder manufacturers
- Worm/Auger pins may need to be changed to a Speco type pin
- For Wolfking/CFS/GEA grinders the Pilot bearing and Nut will need to be changed
- The purchase of the Speco Piping and Valve Assembly is recommended

Frequently Asked Questions (FAQ)

- 1) What direction does the final holeplate install?
 - a. The grooves must be on the cutting knife side. If the grooves are facing you while being installed, STOP, turn the plate around.
- 2) What are the recommended flow valve settings?
 - a. The correct flow setting must be established based on the following:
 - i. The product being processed, beef/chicken/turkey/pork?
 - ii. The size of the final holeplate
 - iii. The fat to lean percentage
 - iv. The expected product typical bone count



- v.
 - vi. If the valve lever is running parallel to the direction of the pipe, it is fully open or 100% flow. If the valve lever is perpendicular to the direction of the pipe, it is fully closed or 0% flow. Moving the lever as shown above changes the opening of the valve. It would be very rare to run the grinder with the 0% flow setting. The smaller the opening the less effective the Bone Collector works. Different settings will need to be established based on the product and holeplate size.
- 3) What is the impact of setting the valve at 0% flow?
 - a. No Product or Bone/Sinew will be discharged. Closing the valve will cause the Bone/Sinew to build up inside of the between the pre-cutter and holeplate. This will cause the product through put of the Grinder to slow down. It will also cause the product to smear, and the knife will chip away at the Bone/Sinew until the bone pieces are small enough to pass through the holeplate. It is not recommended to run a Grinder with a 0% closed flow valve.
 - 4) What is the impact of setting the valve at 100% flow?
 - a. With the flow valve set at 100% flow, it will remove the maximum amount of Bone/Sinew possible. Based on the final holeplate size the maximum bone/sinew size will be no larger than the size of the holeplate. Therefore, the final holeplate size is very critical when determining your allowable Bone/Sinew sizes. It should be noted that the amount of product rejected will also be increased or decreased as the flow rate changes.

- 5) Can I reuse the rejected product from the Bone Collector?
 - a. Yes. If you separate the rejected product into a rework tub labeled edible and keep it free from any other contaminated products it can be reworked and partially saved. At the end of production, the entire product that was rejected can be run through a secondary process that will separate the product from the Bone/Sinew. The product is run through a machine with a screen, the holes in the screen are typically a lot smaller than the final holeplate size of the grinder. The product is squeezed out through the screen and the Bone/Sinew is left inside of the screen. You can now reuse the product, and it will be free from any Bone/Sinew or any other foreign particles. This can also be a good method to use for testing to determine the best "Flow Rate" setting for each of your recipes.
- 6) How can I test the effectiveness of the Bone Collector?
 - a. A simple test can be performed by testing the product after it has been ground.
 - i. Record the following: Product info, final holeplate size, temperature of the product entering the grinder, and the flow rate setting of the Bone Collector.
 - ii. Weigh out a sample portion of the rejected product
 - iii. Press the rejected product through a screen of a known size mesh. The mesh size must be smaller than the size of the final hole plate
 - iv. Record the screen size being used
 - v. Firmly support the screen
 - vi. Press the product sample through the screen by using the palm of your hand.
 - vii. Repeat the test a few times to determine the average % of Bone/Sinew being rejected per sample size.
 - viii. Make sure you are consistently pressing the product through the screen for each test.
 - ix. A similar test can be done to determine the bone/sinew size that is actually left in the product not being rejected.
- 7) What happens when I change final holeplate sizes?
 - a. Typically, holeplate sizes over 3/8 (10MM) holes will not effectively remove Bones/Sinew. The bigger the final holeplate the bigger the size of bone/sinew that will pass through the holeplate without being ejected. The finished product being produced will typically specify the recommended final holeplate size.
- 8) What happens when I use a (4) Blade knife instead of a (8) blade knife?
 - a. A (4) Blade Knife will make less cuts per revolution, therefore an (8) Blade Knife will cut twice as many cuts per revolution. The results of more cuts will reduce the length of the tendons passing through the holeplate. It may also make the product slightly more tender. A cook test should be performed to determine the difference.
- 9) Can I install a double knife set with a Speco Bone Collector?
 - a. Yes it may be possible to operate a double knife set with some grinder manufactures, however, you should contact Speco or a Speco Distributor to discuss this option.