

Warranty and Water Quality Information

Warranty:

In order to maximize the life of your DialLine Diamond AccuStream recommends the use of our Thimble style filter. A 600 hour warranty on the Diamond orifice is offered to those customers using the thimble filter and whose water quality meets the requirements below.

Filtration:

The thimble filter is a small stainless filter with very small holes drilled in a unique pattern to capture any foreign debris which might damage the orifice. The *J2533* or *J3174 Thimble Filter*, (optional), is strongly recommended to protect the orifice from larger particulates in the water. The assembly threads into the valve body just above the head and help to protect the orifice from any damage. If in-line filters are not used it is imperative that the high-pressure lines be purged after any work on the pump or HP plumbing.

Inlet Cutting Water Requirements and Testing

The inlet water should have a pH of 6 to 8 and be clear, odorless, and free of biological materials. To insure the incoming water will not have an adverse affect on the diamond life, the water quality can be tested with the TDS meter.

In other cases it should be analyzed for the following:

- pH
- Silica Content
- Total Dissolved Solids (TDS)



Water Treatment Guidelines:

Testing your inlet cutting water with a TDS meter allows you to quickly and effectively monitor the quality of your inlet water and make adjustment accordingly

High Quality Water	TDS < 50 ppm	No treatment required	No action
Good Quality Water	50 ppm < TDS < 150 ppm	Soften only	Contact local water treatment specialist
Medium Quality Water	150 ppm < TDS < 250 ppm	Soften or TDS removal	Specialist or RO system
Poor Quality Water	TDS > 250 ppm Silica > 15 ppm	TDS removal	RO System available through AccuStream

NOTE: Do not treat to 5 ppm or less: Water of this high of purity is overly aggressive and will damage stainless steel components.



Maximizing diamond and ruby orifice life

1. When changing an orifice, make sure you have clean hands and a clean work area.
2. When a new orifice is installed the adapter above the orifice has no water contained inside. You need to open the cutting head and bring the water pressure up gradually as to not pressure shock the top of the orifice.
3. Too much abrasive being fed to the cutting head will cause premature orifice failure. Confirm you are not using excessive amounts of abrasive.
4. At the end of your cut shut the abrasive off first. This will clear out the abrasive feed line and help stop abrasive migrating up toward the orifice, causing premature failure. The time should be 1/2 a second. This may not be possible if you are cutting material that delaminates.
5. If the orifice life suddenly goes down, check to see if you have a high-pressure inline filter. If it is clogged it will start to come apart and take out your orifice.
6. Purging the lines may be necessary after changing high-pressure components as contaminants may cause your orifice to fail soon after doing maintenance the intensifier.



DialLine Cutting Head Installation Guide

Introduction

The **DialLine Cutting Head** is normally used with diamond orifices for improved cutting performance and superior life. Ruby orifices are also available. A new feature of the DialLine cutting head is that the diamond orifice and mixing chamber are replaceable. Also new are swivel adapters for proper positioning of your abrasive inlet. The nozzle nut provides an additional alignment to the nozzle and helps in the removal of the nozzle if it is broken. To minimize wear from spray back, AccuStream now offers nozzle guards for 3 and 4" nozzles. Also available are 3/16" inlets, for those using smaller abrasive feed lines.

DialLine Head Set-up and Installation



NOTE: Always use HP lubricants, such as Blue Goop or AccuGoop on metal-to-metal mating surfaces such as threads and the orifice retainer-adapter contact area.



NOTE: Make sure that the top of the head and bottom of the adapter are clean, wash out if necessary.

Installing the Nozzle and Nozzle Nut:

Standard Nozzle Nut:

Loosen the standard nozzle nut and remove the nozzle collet from the inside of the standard nozzle nut. Slide the collet onto the end of your selected nozzle making sure the tapered side is facing towards the bottom end of the nozzle and slide the nozzle into the abrasive body until it bottoms out. Thread the nut to the abrasive body making sure the collet remains butted up to the abrasive body. Hand tight is sufficient.

3" or 4" Nozzle Guards:

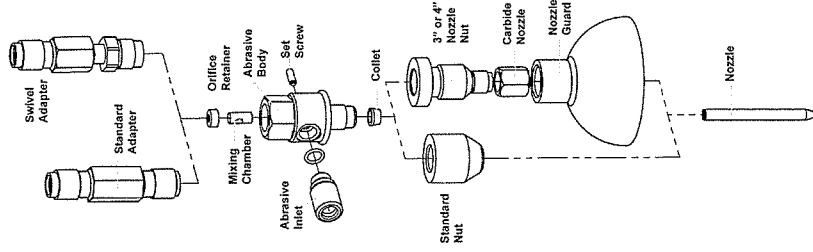
Loosen the nozzle nut and remove the nozzle collet from the inside of the nozzle nut. Slide the collet onto the end of your selected nozzle and slide the nozzle into the abrasive body until it bottoms out. Thread the carbide nut to the nozzle nut. Thread the nozzle nut to the abrasive body making sure the collet remains butted up to the abrasive body. Hand tight is sufficient. Install the rubber nozzle guard by sliding onto the end of the carbide nut. Press to fit.

Installing the Orifice:

Please See "Installing the New Orifice" on the next page

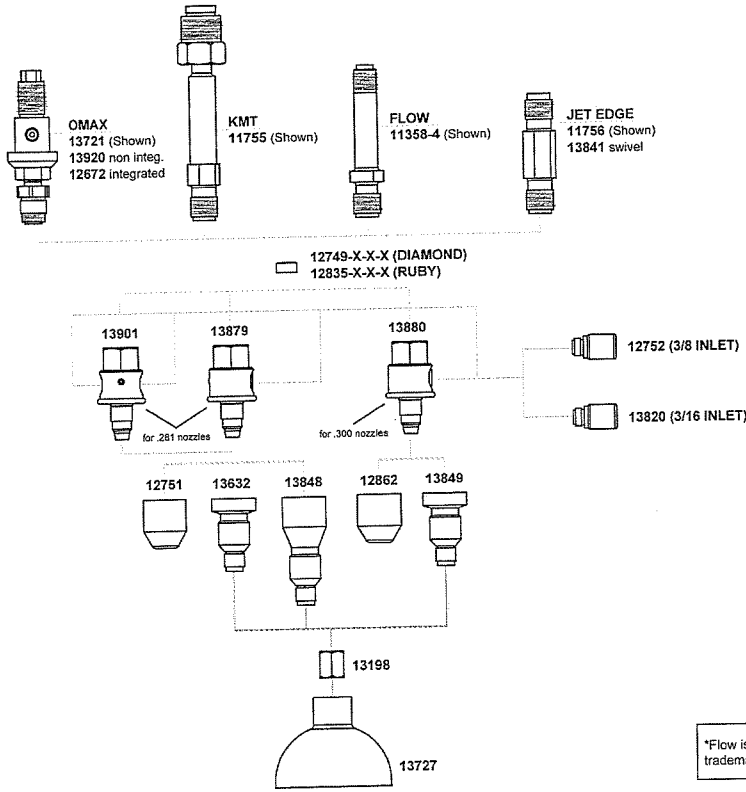
Installing the assembled head:

Thread the DialLine head onto the bottom of the adapter and torque to seal. Use 3/8" OD x 1/4" ID or 3/16" OD x 1/8" ID hose or tube (depending on abrasive inlet chosen) for feeding abrasive into the head. Push the hose into the connector until it bottoms. The hose may feel tight and it may be necessary to put a light lubricant on the OD at its end.



DiaLine Adapters and Parts

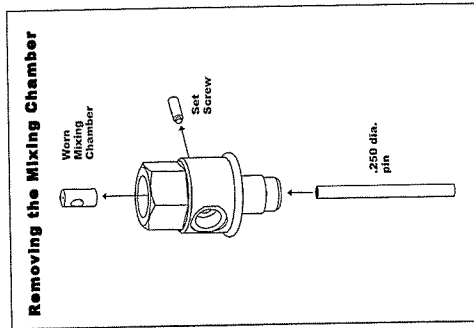
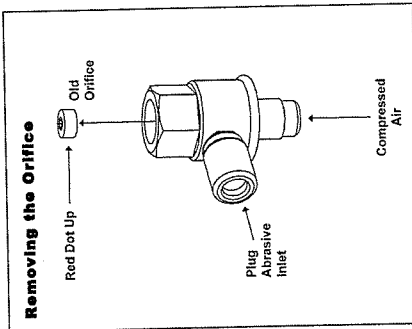
NOTE: (Omax style 13721 only) use 4 in. nozzles to maintain OEM tip location.



.300 DiaLine Specific	
13880	Body
12862	Standard Nozzle Nut
13849	3" Nozzle Nut
12276	Nozzle Collet
.281 DiaLine Specific	
13901	Body
13878	Dual Inlet Body
12751	Standard Nozzle Nut
13632	3" Nozzle Nut
13848	4" Nozzle Nut
11357	Nozzle Collet
Common Parts	
12747	Mixing Chamber
13573	Dual Mixing Chamber
12752	3/8" Abrasive Inlet
13820	3/16" Abrasive Inlet
13198	Carbide Nut
13727	Nozzle Guard
11679 - 012	-012 O-ring
12836	#8-32 X.5 SST DP Set Screw

AccuStream DiaLine Orifices	
12835-xxx	Ruby Orifice
12749-xxx	Diamond Orifice

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DiaLine Maintenance Information

Replacing the Orifice

Removing the old orifice:

1. Remove the DiaLine head from the adapter.
2. Remove the inlet connector, nozzle nut and nozzle.
3. Block the inlet connector hole and blow air through the nozzle nut side of the abrasive body to force the old orifice out.

Installing the new Orifice:

1. Install the Orifice Retainer flat side down into the cutting head body. The top of the retainer has a slight conical shape and holds the jewel orifice. This side should still be visible after installing the orifice retainer.
2. Apply a light coat of HP lubricant to the top face of the orifice retainer and threads of the adapter.



NOTE: Diamond Orifices must be installed with the red dot facing up. Installing the Orifice the wrong way will damage the orifice.



NOTE: If the Orifice does not come out using forced air alone, you can use the same method to remove the mixing chamber to remove the orifice. See below for detailed instructions.

Replacing the Mixing Chamber



NOTE: The mixing chamber may require replacement after extended use. When the hole through the mixing chamber exceeds .090 it should be replaced.

Removing the worn mixing chamber:

- Remove the inlet connector, nozzle nut, and collet from the abrasive body. Loosen the setscrew that holds the mixing chamber a few turns.
1. Push the orifice retainer and mixing chamber up through the top of the abrasive body with a .250 dia. pin.

Installing the new mixing chamber:

1. Place the orifice retainer in the bore with the cone side up and hold it down with a finger.
2. Slide the new mixing chamber into the body up from the bottom until it is touching the bottom of the orifice retainer and align the abrasive inlet hole of the chamber with the inlet hole of the abrasive body.
3. Tighten the setscrew to secure the mixing chamber.
4. Reassemble the DiaLine head and thread the head back onto the adapter.