Operating Instructions
for High Precision Wire Stripping Heads with diamond blades

The HP DIA Wire Stripper Heads were developed to strip enamelled wires on automated coil winding systems.

The stripping unit is usually placed between wire break and winding station.

Actually wires of 0.08 to 2 mm in diameter are stripped with our wire stripping units.

Correct adjustment of the head, and speed and feed corresponding to the wire assumed, the heads allow more than 1 million stripping actions without regrinding.

The direction of rotation is counterclockwise in the wire feed direction.

A) The main parts of the wire stripper head and how it works (please see sketch drawing attached)

1) The body (1) as you can see on attached drawing 960308-4b.

2) A set of three blade holders (2), each of them carrying a diamond blade (8). The set is always adjusted to the body to achieve the high precision.

3) The central adjusting screw (3), which is screwed into the body from the front end. The more you turn the screw into the body, the closer the blades will get to strip smaller wire diameters.

4) The guide disk (6) which is located behind the blade holders and assures the exact simultaneous movement of the three diamond blades. Thanks to this disk the three blades touch the wire at the same moment which is essential when you work with very fine wire on automated machines.

B) Adjustment of the Stripper Head

To achieve a maximum lifetime of the diamond blades, please follow these instructions:

For adjustments of the diameter, always work with wire in place.

1) Rough setting

The centrally located adjustment screw (3) defines the diameter. Loosen upper setting screw (5), place setting pin in adjusting screw (3) and turn until the blades are positioned at the approximate diameter of the wire to be stripped. The blades should be touching the wire slightly.

2) Fine setting

Start the system and pull the wire to remove the insulation. Should the insulation not be removed entirely, turn with setting pin the adjusting screw (3) clockwise. If on the other hand the metal of the wire is chipped, turn the adjusting screw counter clockwise till the insulation comes off completely, but without chopping the wire. You might have to compensate the thread of the adjustment screw.

Now you can lock the upper setting screw (5) but not too tight since you might damage the thread of the adjusting screw.

Note

Please do not try to regrind the blades yourself. We have special equipment and fixtures to guarantee a precision edge and the prefect reassemby of the head.

Attention:

Despite of the copper protection (4), do not tighten the setting screw too hard. max. 0.15Nm

The optimal blade distance is about 5µm to 1µm below the wire diameter. If you work constantly below this optimal diameter, the lifetime of the blades is reduced!

The adjustment screw can be reduced that far into the Stripper Head Body (1) that the blades may touch each other. Accelerating of the head then may destroy the diamond blades.

Never touch the blades with metallic objects! Be careful that no hard objects (screwdriver etc.) touch the blades while the head is rotating. Besides damaging the blades, it could cause injuries to the person manipulating the instrument.

C) Adjustment of speed and feed

You can largely influence the stripping result by changing spinning speed and wire feed. The best results are obtained with high speed and low feed.

Depending the type of insulation and feed, the speed should be between 5000 and 12'000 rpm. For setup and trials a speed of 7'000 rpm is suggested.

We would use feed of 0.3 to 0.7m/min. Faster feed lead to insulation chips, which may disturb the winding process.

D) Possible problems and solutions

spinning direction:

- The stripper heads can be spun in both directions. Nevertheless the blade geometry corresponds to counter clock wise use seen in direction of wire feed.

Wire ruptures:

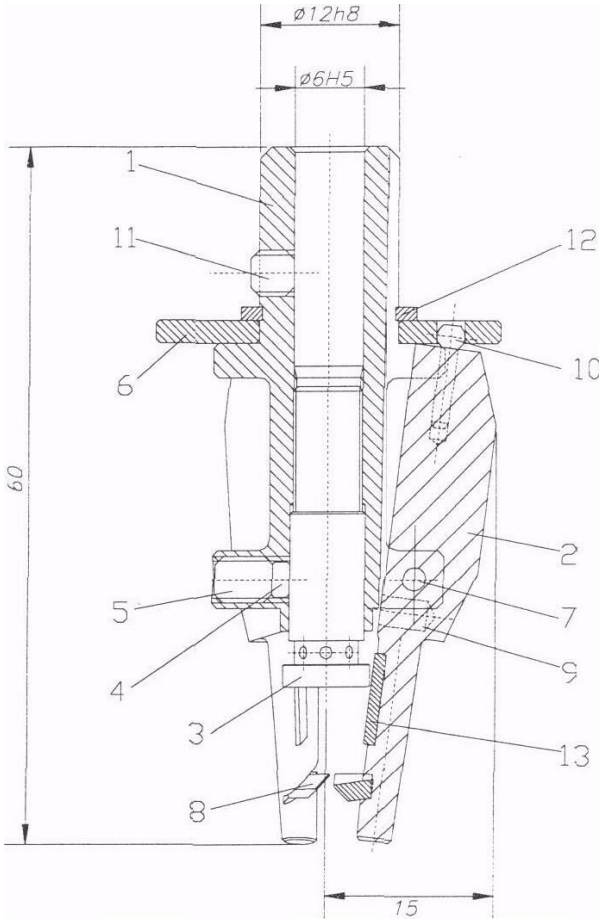
- Check the diameter with Micrometer, readjust.

One-sided or irregular strippings:

- Check speed of drive and head.
- Check wire tension.
- Check position of the head along the wire - in the middle of the two wire guides or closer towards one of them.
- Best results are achieved, when wire is in vertical position. Horizontal positions may create problems especially with larger wire diameters.

Insulation chips, bad aspiration:

- Check the diameter with Micrometer, readjust.
- Modify wire speed.
- Modify head speed.
- Check turning direction of aspirating engine and head.
- Modify direction of air flow around the head.



1	stripper head body	7	bolt
2	blade holder	8	diamond blade
3	adjustment screw	9	spring
4	copper protection	10	guide head
5	setting screw to lock adjustment screw	11	setting screw to lock body on drive axle
6	guide disk	**12**	ring