



**BENNINGER**

## **Hydroc**

The only hydroextractor bringing the bobbin back into its original shape



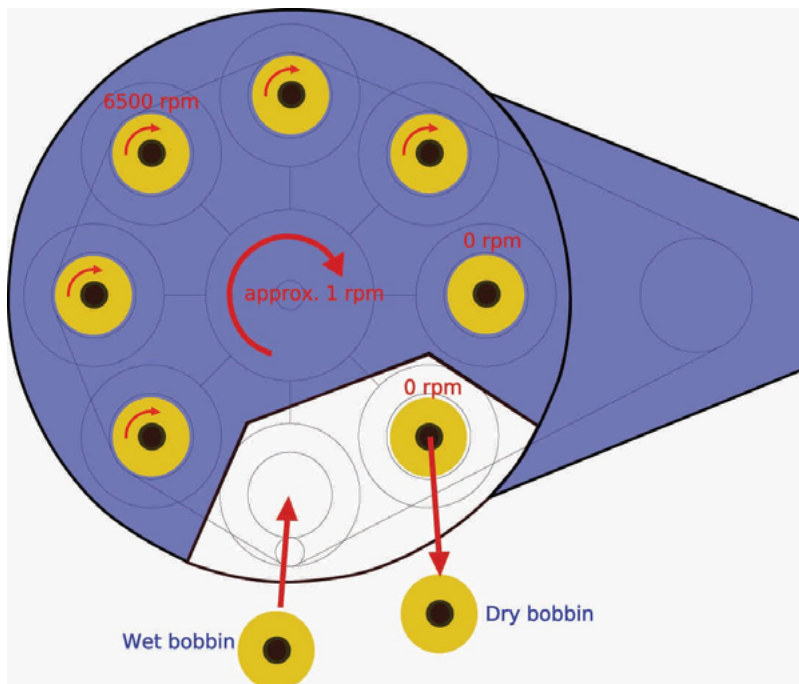
# Hydroc

## The Process

The yarn package is loaded into a stationary basket at the loading opening of the extractor. On a round turntable, the basket is slowly and continually travelling in a large circle. Once the basket leaves the loading area, it disappears underneath the centrifuge housing where the bobbin is accelerated to 5500 - 6500 RPM.

The acceleration is achieved by a drive belt, which is continually kept in motion by the central drive motor. Deceleration is achieved by an inductive brake. This magnetic braking system has no moving parts and has the great advantage of noise reduction and reduced wear on bearings, supports and sheaves.

The loading and unloading process of one package at a time allows for continuous operation of the hydro-extractor.



### Single head hydroextracting

The name HYDROC stands for almost 50 years of experience in the field of single head hydro-extraction of yarn packages. The robust design of the machine has proven itself over many years. For loading and unloading the hydro-heads of the Hydroc stand still. The centrifuge heads are made of high-strength aluminium. The high rotational speeds of up to 6500 RPM allow for high dewatering efficiency with low residual humidity in the package.

### No deformation - unique gripping system

When the bobbin starts to spin, the grippers hold it by centrifugal force in its position. The result is an absolutely round bobbin without any yarn layer movement and 100% levelness of residual moisture content all over the entire bobbin. In many applications the rewinding of dyed yarn is not needed anymore and therefore saves the cost of rewinding. The automatic grip system allows processing of different package diameters up to a variation of 30 mm.

The new machine is equipped with a contactless and wear-free electro-magnetic brake. The permanent magnets do not need electric power.



#### Quality increase

- No hairiness compared to pressure dryer method
- No deformation of the packages
- Excellent rewinding properties
- Low residual moisture
- Even humidity distribution through the package

#### Ecological production

- Closed system for effluent low compressed air consumption
- Significant energy savings
- Low noise level
- Ergonomic design

#### Production cost reduction

- Reduction of yarn waste due to layer movement
- Rewinding can be eliminated in a lot of cases
- If rewinding is required: Faster rewinding speeds
- Dyeing tubes last longer
- Operator of centrifuge can also load dryer
- Low energy consumption



### One-Head Hydro Extractor

The Hydroc I is the solution for small scale production still having all the advantages of the bigger Hydroc 8 and Hydroc 10. The bobbin is placed inside the Hydroc I, lid closes automatically and reopens after approx. 50 seconds, so that the dry bobbin can be exchanged with a wet bobbin.

Optionally the Hydroc I can be equipped with an injection device to apply lubricants. This has proven to be the best and most efficient method to lubricated textured polyester. Compared with an application of lubricants in the dye machine this has following advantages:

- Eliminates waste water
- Increases capacity of dyeing machine as the total process time is reduced by approx. 30 min.
- Better levelness of lubricants and therefore no stripes after weaving

### Production capacities

Hydroc I:	40 - 60 bobbins per hour
Hydroc 8:	320 - 400 bobbins per hour
Hydroc 10:	400 - 500 bobbins per hour

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