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Bolondi XB 031 Rotojet cleaner - guidance for use with wine barrels

See also the separate document 'OPERATING AND MAINTENANCE MANUAL HEADS - XB-031', regarding maintenance of the head and general principles of operation

Cart mounted version of the Bolondi (with high pressure hose and ball valve)

Bolondi XB 031 head specifications

- Material: 316 Stainless Steel
- Operating Pressure: 5 – 150 Bar (for wine barrel cleaning the maximum recommended water baster setting is 100 Bar)
- Max operating temperature 90C
- Flow: The standard unit requires a water blaster capable of approx. 17 LPM – Lower flow heads are available as well
- Nozzles: 4 (2 nozzle units also available)
- Materials: Seals and gears of PTFE and carbon fibre, NBR O-rings, body 316 stainless steel.
- Weight: 4.6kg (head only)
- Complete cycle time: approx. 1.1 Min (3mmin 30 sec typical time to clean 1 x barrel)
- Approximately 24 rotations per minute, 25 rotations to for complete cycle

Setting Water Blaster Pressure

- For wine barrels the cleaner works best with the supplying water blaster set for 80-100Bar (1170-1470 PSI). However it is important to check suitability of pressures for your own set up, being sure to protect the barrels from damage.
- When used at higher pressures there is a possibility of damaging the wood in the wine barrel
- The operator or winemaker should regularly check the barrel with particular attention to the bung area of the barrel in case there is damage to the wood. (The bung hole is the nearest point to the cleaning head and the most likely point for damage to occur if the barrel wood is soft and/ or the water blaster pressure is too high).
- If there is damage on inspection or if wood splinters wash out during cleaning the blaster pressure should be turned down to a lower pressure.
- Once a preferred pressure is determined the operator should regularly check that the water blaster is set to this pressure before cleaning commences.

Insertion depth into wine barrels

- The bung hole should be face down when inserting the cleaner.
- Depending on whether a trolley or other device is used, in order to get the cleaning head into the barrel the barrel may need to be rocked back a few degrees in the rack to allow entry
- The barrel cleaner should be inserted from the bottom of the barrel as far as is possible without blocking water exiting through the bung (if the bung hole is blocked by the cleaner the lower portion of the barrel may flood, restricting cleaning capability).
- To check for best insertion depth, fully insert the Bolondi head (until it is pressed against the bung hole) then drop the unit downwards around 10mm This should provide a good penetration distance into the barrel to protect the bung area from damage while still allowing water to exit.

Wine barrel rack height and use with a cart

- Wine barrels in racks can vary in height (from as low as 240mm to up to 285mm off the ground). Wine bung holes are generally 54mm.
- The standard Bolondi barrel cleaner on trolley is designed for barrel heights above ground of around **254mm**
- Target barrel height is calculated as follows = Standard cart height (with 100mm wheels) 110mm + Height of cleaner to fully seal bung 134mm + bung ventilation distance (10mm) **= 254mm**
- Note that barrel racks/ wine barrel can vary across a winery.

- Options to vary the barrel insertion height (apart from altering the cart's mounting bracket)
    - Reduce height – use small wheeled trolley. With 75mm wheels the target barrel height reduces to 240mm
    - Increase height – use larger wheel diameter. With 125mm wheels this increases the target barrel height to 266mm
    - Also Increase height by using a plate to lift the barrel cleaner further into the barrel

Maintenance (- see the associated maintenance manual)

- It expected that after approximately 700 hours use the Bolondi head should be inspected. The unit should be cleaned if required, gear tolerances checked and seals and gears replaced where required. Requirements for this service vary significantly depending on local water quality and related factors.

If the cleaning head stops rotating

If water is coming out of the nozzles but the head stops rotating please check the water blaster pressure is set for a suitable value and correct as follows;

- **If the cleaning head has been used successfully for a period with your existing water blaster and is stopping after several months of use,**
    - It is possible that a build up of calcium and other minerals or debris in the water is stopping efficient turning. In this case the unit needs to be opened up and serviced (contact your service agent or maintenance department). How regularly this happens depends greatly on the local water supply.
    - With extensive use, tolerances in the head can be altered causing rotation to stop. In this case a full service possibly replacing internal planetary gears and other parts may be required
- **If a new installation and the new cleaning head fails to turn properly at start up**
    - Most units are rated to 17LPM. If flow rates drops below eg; 15LPM then the unit will stop turning.
    - Check flow rate through the head is about the same as the rated flow rate of the unit by eg filling a 10L bucket for 20 seconds.
    - If the water blaster flow rate is too low investigate turning up the flow rate at the water blaster or swapping out the diffuser and nozzle set in your cleaning head to a suitably rated lower flow unit.