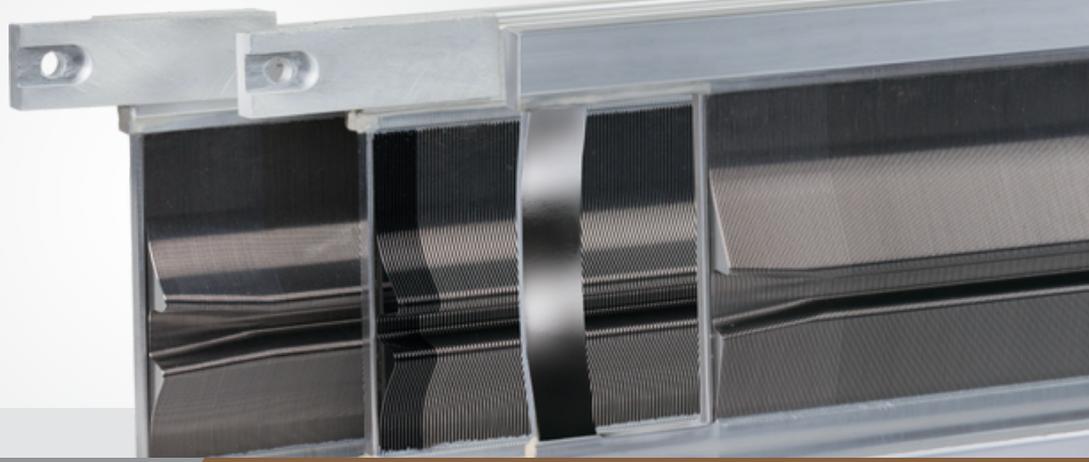




NAVKAR
FABTECH LLP

SERVICE BROCHURE



Ultrasonic Cleaning / Airflow Recalibration

Navkar Ultrasonic Cleaning Machine for Airjet Reeds

NAVkar ultrasonic cleaning machine for airjet reeds is an advanced cleaning device that uses high-frequency sound waves (ultrasonic waves) to produce microscopic bubbles in a cleaning solution. These bubbles implode upon contact with the reed surfaces, creating a scrubbing action that effectively removes contaminants, such as dust, lint, oil, and other residues.



The machine consists of a stainless steel tank filled with cleaning solution, ultrasonic transducers, and a control panel. The airjet reeds are submerged in the solution, and when the machine is activated, the ultrasonic waves thoroughly clean the reeds without causing any damage. This method ensures a deep and consistent cleaning, prolonging the life and efficiency of the airjet reeds.

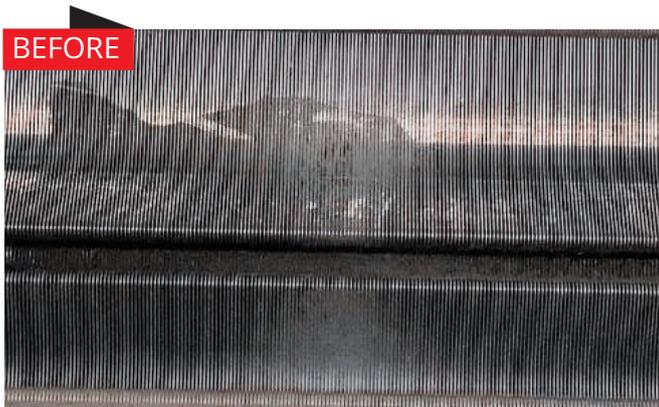
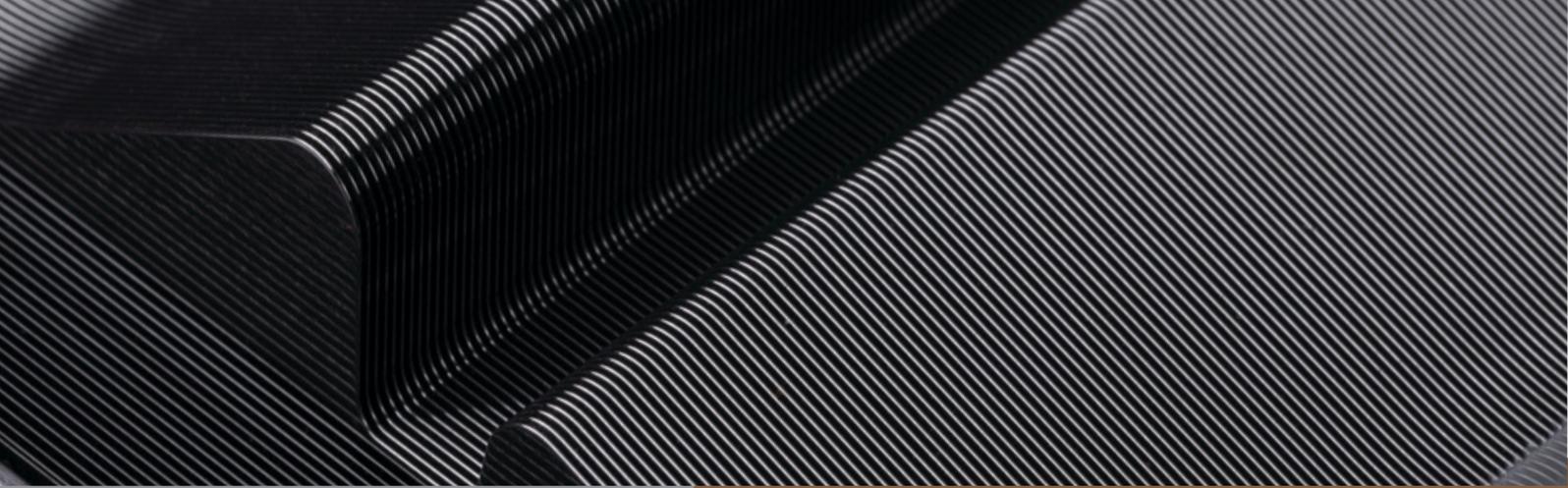


Airflow Recalibration of Airjet Reeds:

Airjet reeds are a critical component in air-jet weaving machines, which utilize compressed air to propel the weft yarn across the warp. Ensuring that this air flows uniformly and at the correct pressure is crucial for the production of high-quality fabric. Purpose: Over time, due to wear, residue buildup, or other factors, the airflow through the reeds may become uneven or deviate from its optimal setting. Recalibration ensures that the yarn receives consistent air pressure, preventing defects in the woven fabric.

Benefits :

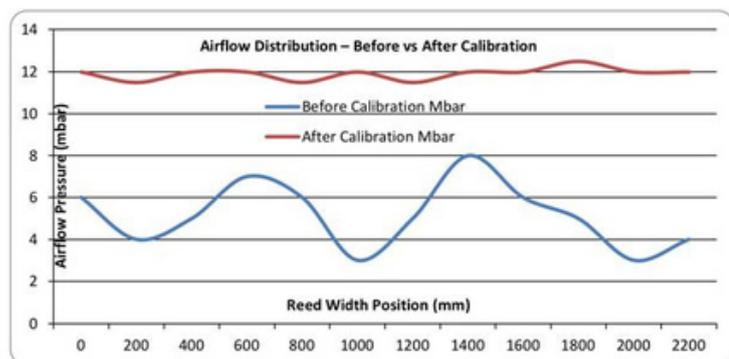
- **Increased Efficiency** : Proper airflow reduces chances of machine stoppages and minimizes waste.
- **Extended Reed Life** : Regular recalibration and maintenance can extend the life of the reeds.
- **Reduced Operational Costs** : By maintaining optimal airflow, the machines run more efficiently, which can lead to a reduction in energy consumption and lower operational costs.
- **Minimized Downtime** : Regular recalibration can identify potential issues before they lead to breakdowns, thus minimizing downtime and avoiding costly repairs or production delays.
- **Enhanced Machine Performance**: Even and precise airflow contributes to the overall performance of the airjet weaving machines, leading to smoother operation and less mechanical stress.
- **Long-Term Savings** : Investing time and resources into regular recalibration may lead to significant long-term savings.
- **Improved Fabric Quality** : Uniform airflow ensures consistent yarn insertion, reducing fabric defects.



Navkar’s ultrasonic cleaning process removes contaminants from deep inside the dent gaps without damaging the reed. As seen in the before and after images, the reed surface is thoroughly cleaned, restoring original airflow conditions and improving loom performance.

Airflow Calibration – Before & After (Technical Proof)

Reed Position (mm)	Before Calibration Mbar	After Calibration Mbar
0	6	12
200	4	11.5
400	5	12
600	7	12
800	6	11.5
1000	3	12
1200	5	11.5
1400	8	12
1600	6	12
1800	5	12.5
2000	3	12
2200	4	12



Uneven airflow across the airjet reed width leads to unstable weft insertion, fabric defects, and frequent loom stoppages. Over time, dust accumulation, oil residues, and dent wear disturb the original airflow balance.

Navkar’s Airflow Recalibration process restores uniform air pressure across the full reed width. As clearly demonstrated in the before and after airflow distribution data and graph, post-calibration airflow becomes consistent at all reed positions, resulting in smoother loom performance and improved fabric quality

Note: Airflow readings differ from loom to loom. The data shown is only for reference to highlight the improvement after calibration.

REMOVAL OF GROOVE FORMATIONS:

In case of reed groove formations, we can offer a repair service so that customer can use the same reed with new replaced dents.

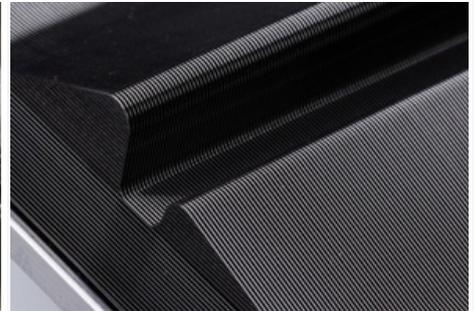
- Available service until 26 DT/CM (132DT/2")
- Available service only for airjet reeds.

REMOVAL OF DAMAGED DENTS:

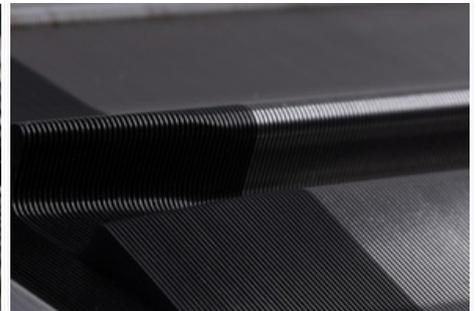
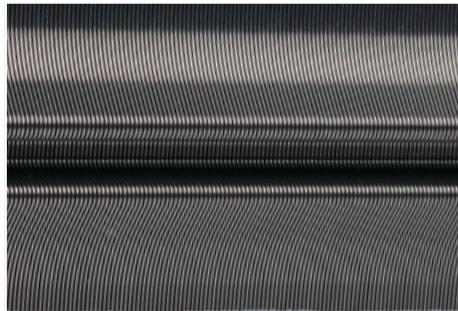
In case of damaged profile dents due to accident, groove formation or weft detectors going through the reed, we can take off the damaged dents, with this service customer can reuse the same reed without the damaged dents.

- Available service until 26 DT/CM (132DT/2")
- Available service only for airjet reeds

BEFORE



AFTER



ADDING EXTRA SPRINGS:

This service is used by customer where more dent stability is required for already purchased reeds.

By adding extra springs on top and/or bottom, a higher dent stability will be achieved. Therefore during the fabric formation, less vibrations will be transmitted to the reed-dents.

OTHER SERVICES:

- Non - Conical to Conical Reeds (2 color to 4 color)
- Addition of Extra DLC Wherever required in the reed
- Count change possible (+/- 2 count up and Down)
- Change of Aluminum profiles
- Airflow recalibration
- Ultrasonic cleaning



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