

INDUSTRIAL SOLUTIONS

**GREEN
ENERGY**

BVK
HYDROTECH



Celebrating 60+ Years
(Since 1963)



Technical Woven Mesh Solutions

**For Electrolyzers
And Fuel Cells**

TECHNICAL WOVEN MESH SOLUTIONS

BVK Group Reliable & Sustainable



Founded
1963



Integrated
Weaving Plant



Employees
300+



Equipment Origin
Germany



Metal Volume
650+ MT p.a.



Certifications
Integrated IMS System
with ISO, IATF, OHSAS and
Environmental Management

EXPORTING TO

25+ COUNTRIES

WE ARE PRESENT WHEREVER
OUR CUSTOMERS NEED US.

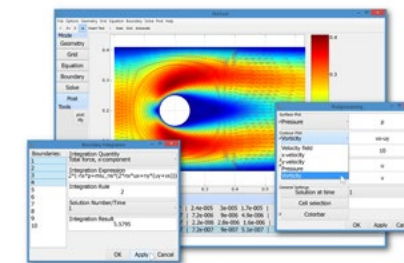
*Delivering
Excellence
...Together*

A portfolio to meet all your needs.

BVK group is a diversified enterprise with presence in precision Industrial filtration solutions, IT & Infocom, Education & Real estate since 1963. BVK strives to embrace customer satisfaction through continuous improvement in its products & services. BVK's long standing experience in multiple industrial filtration segments allows it to offer customised and value engineered solutions for challenging process environments.

BVK's competent technical team, multiple certifications and nearly 2 decades of experience in the energy space generates immense trust in our customers for establishing long term relationship.

1 R&D Prototyping



BVK uses Computational Fluid Dynamics (CFD) & rapid prototyping to analyze flow dynamics within the mesh structure.

2 Integrated Process Harmonization

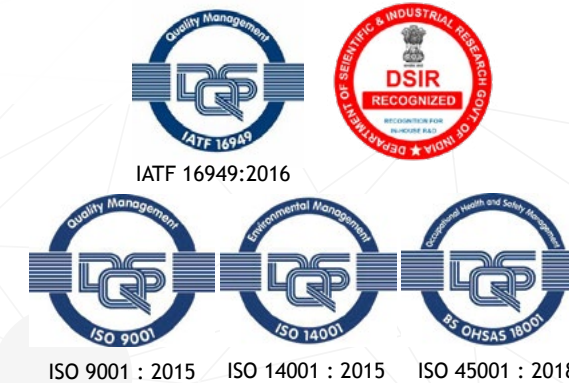


Process reliability ensures product accuracy which is a result of collaboration between us and our customers.

3 Strong Supply Chain Network



Ensuring a reliable and certified supply chain network enables risk mitigation and robust supply networks.



Certified Processes



Sustainable Volume Production

Mesh expertise from weaving to coating.

Reliability with Efficiency

Treatments

- Our process allows to change Mesh hardness, softness and formability
- Micro-structure annealing: alters material physical properties
- Work hardened material compensates forming tensions
- Laser cutting

Coatings

- Alternative coating possibilities
- Pre-Post coating processes
- Ability to modulate coating thickness & pattern
- Advanced material science used for coating granule application
- Ability to define spec pattern

Engineering

- Prototyping
- Simulation assessments
- Cost evaluations
- Material recommendations
- Mesh design optimization
- Ability to work with close tolerances

Quality Control

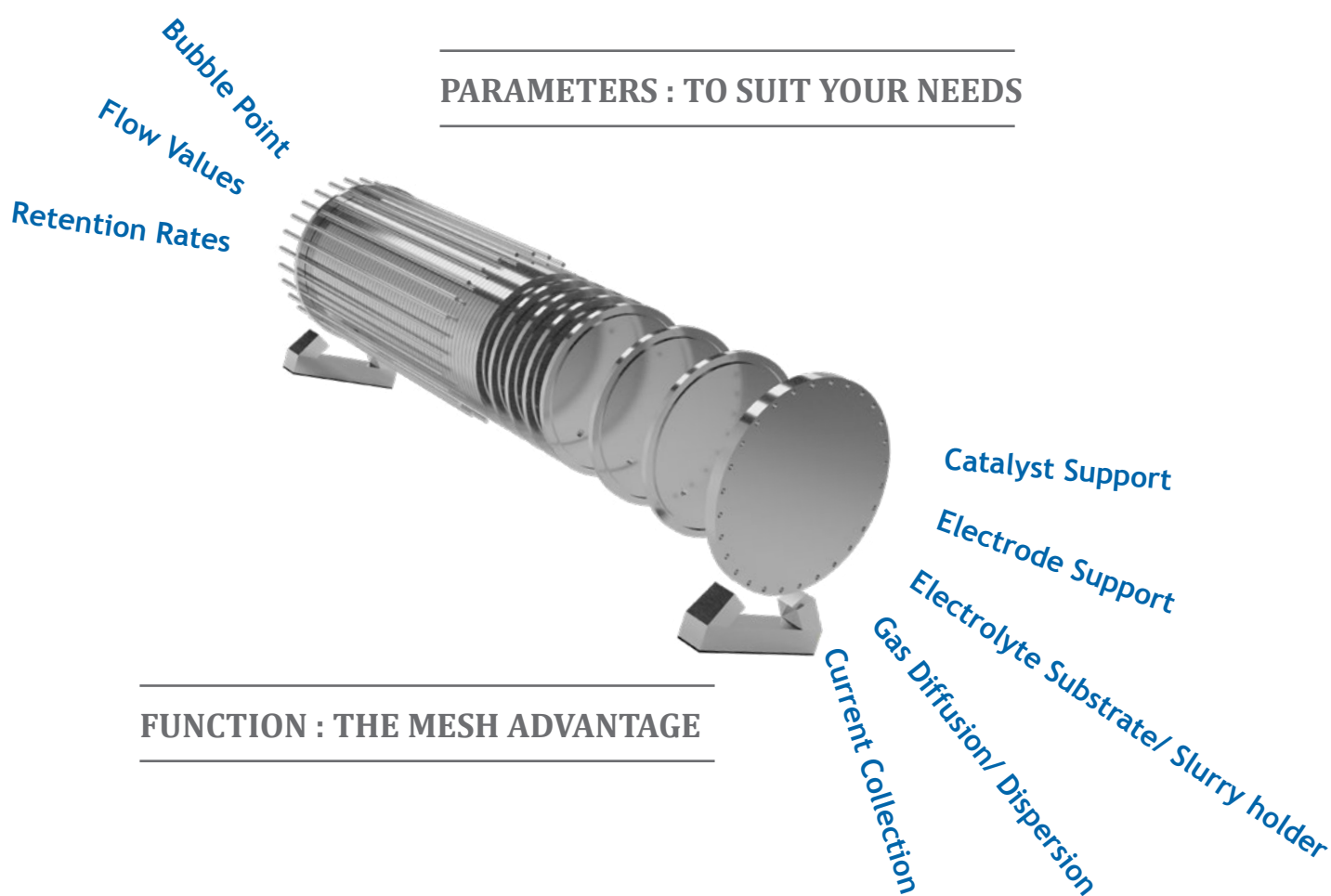
- 100% Traceability
- Product standard harmonization
- Process and quality control plans
- Custom made testing equipment
- Light-box and video inspection



Through its committed, dedicated research and development work, BVK has been able to secure its technological edge and commercial success.

Electrodes for Electrolyzers.

Shaping the future of Electrolyzers

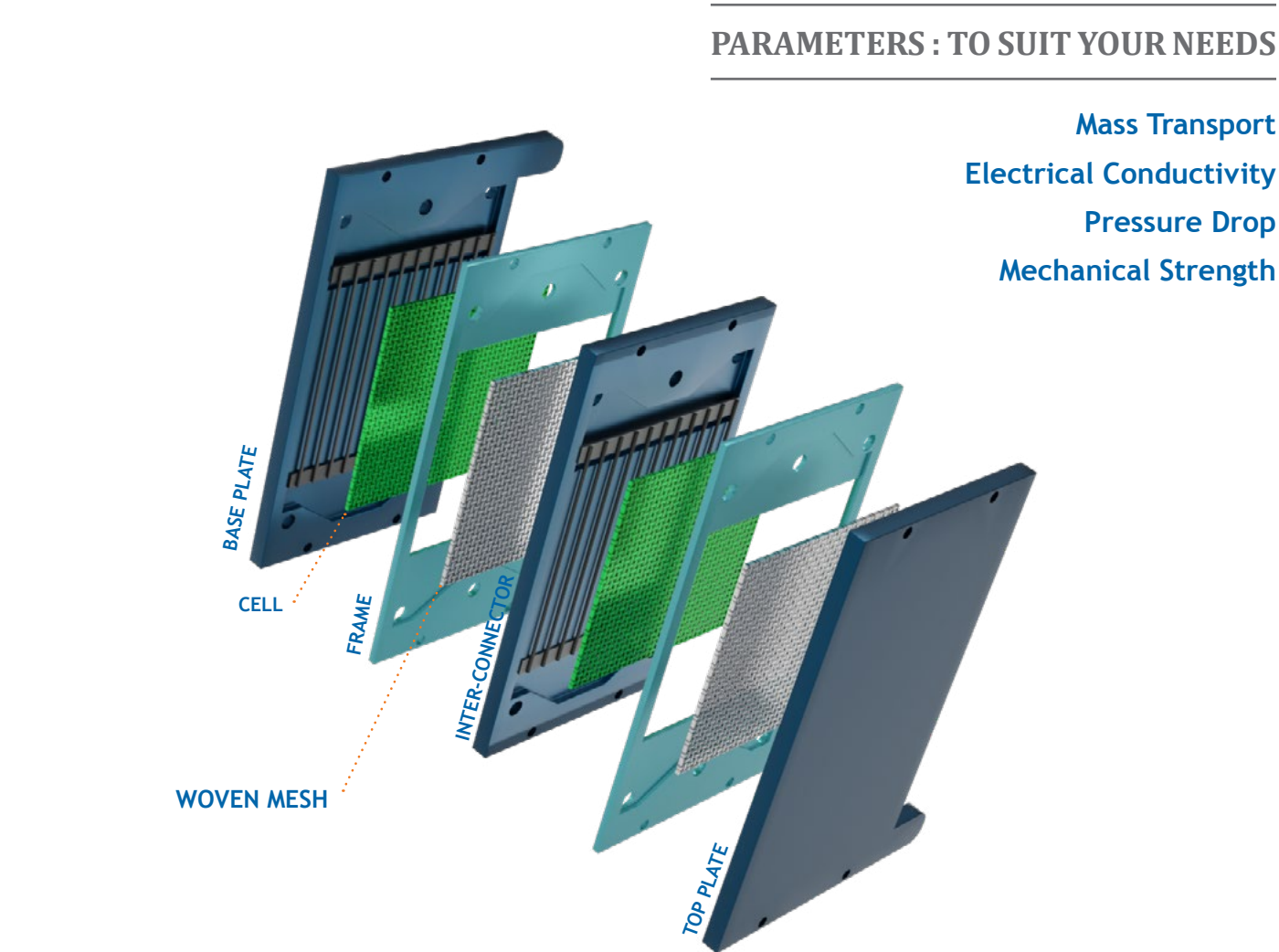


 **POROSITY CONTROL :**
By adjusting weaving parameters, we can precisely control the porosity which impacts the gas flow through the electrode resulting in improved efficiency.

 **CONDUCTIVITY :**
The woven wire mesh creates a tree network that will significantly increase the surface area of the material, thereby improving conductivity.

 **SURFACE AREA COATING :**
Using proven innovative technologies on the woven mesh to enhance surface area which improves hydrogen production and stack efficiency.

Fuel Cell Electrode Components.



High Conductivity
Current Collection & Distribution
Improved Gas Diffusion
Resistance to Deformation
Flexibility
Porosity

 **COMPATIBLE WITH :**
Alkaline Fuel Cells (AFC)
Solid Oxide Fuel Cells (SOFC)
Polymer Electrolyte Membrane (PEM)



Above : Our Facility

SCALABILITY WITH STABILITY

We prioritize innovation through manufacturing excellence by pursuing global standards. We incorporate state of the art technologies that place us at the forefront of global manufacturing. Central to our commitment is the implementation of Total Quality Management (TQM) practices guided by standardized control plans and Production Part Approvals (PPA) procedure.

Materials

Various base materials are being used for this application from most common alloys like Carbon Steel and Stainless Steel to modern alloys like Nickel and Nickel based alloys including Ni 99.6%. Other possible alloys like Crofer 22H, Copper, Aluminium and Titanium can be used to weave a mesh depending on the desired performance criteria of the customer.

MATERIAL	DESCRIPTION	AISI/UNS
1.4301	X5 Cr Ni 18 10 (V2A)	304
1.4306	X5 Cr Ni 18 11	304L
1.4401	X5 Cr Ni Mo 17 12 2 (V4A)	316
1.4404	X5 Cr Ni Mo 17 12 2	316L
1.4841	X10 Cr Ni Si 25 20	314
1.4539	X1 Cr Ni Mo Cu 25 20 5	904L
1.4760	X1 Cr Ti La 22 (Crofer)	S 44535
2.4602	Ni Cr 21 Mo 14 W (Hastelloy C-22)	N 06022
2.4956	Ni Cr 22 Mo 9 Nb	N 06625
2.4060	Ni 99.6	N 02200
2.4066	Ni 99.2	N 02200
2.4068	LC-Ni 99.2	N 02201
2.0060	Copper	E-Cu 57
3.3555	Aluminum	Al Mg 5

Responsibility in action.

Addressing the Challenge

Renewable energy is increasingly important as more governments & companies look for clean energy sources; fuel cells and electrolyzer present a wonderful opportunity. For certain functions across both products woven mesh is a preferred product option in the industry. Its shape, porosity, and bonding capability makes it a versatile choice.

Carbon Footprint

BVK prioritizes Environmental, Social and Governance (ESG) objectives as a move towards reducing carbon emissions and achieving ESG goals. We demonstrate our dedication to sustainable energy practices and efficient Energy Management Systems (MES). A notable aspect of our sustainability initiatives is that currently 50% of our energy consumption comes from renewable sources. Our goal is to become 100% self-reliant with renewable sources.

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Always a step ahead.

Sustainable Packaging

We embrace packaging solution that are completely reusable and can be recycled and support a circular economy. Adopting 100% reusable and recyclable aligns with our sustainability efforts meeting our sustainability efforts and fulfilling corporate social responsibility objectives.

“Helping customers achieve ESG goals.”

STRONG COMMITMENT TO CORPORATE SOCIAL RESPONSIBILITY



SUSTAINABILITY
50%+ ENERGY NEEDS POWERED THROUGH RENEWABLES



DIVERSITY
20% OF EMPLOYEES ARE WOMEN IN THE GROUP

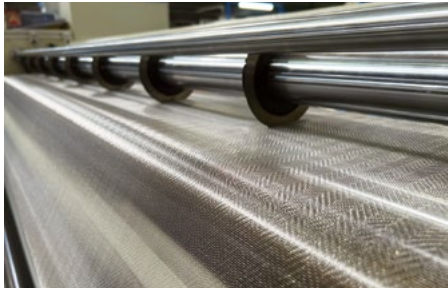


DIGITAL ENERGY MANAGEMENT SYSTEM
DRIVING CONSERVATION



SUSTAINABILITY EMBEDDED IN OUR MISSION
‘SUSTAINABLY GROW’

DIGITALLY AGILE
ENTERPRISE USING
INDUSTRY 4.0
AND M.E.S.



SERVICING GLOBAL CUSTOMERS FOR 60+ YEARS



ACHIEVING ESG GOALS BY 2030



OUR DIGITAL VISION IS AN ECOSYSTEM STRATEGY.



DRIVING INNOVATION WITH CUSTOMER SATISFACTION

“Joint R&D Programmes with Government of India”

Successful Collaborations

Our company is proud to have received recognition, from the Government of India through the DSIR program for its research and development (R&D) efforts. We provide a range of tests including advanced Computational Fluid Dynamics (CFD) analysis, examination of grain structure, topography assessments of air permeability and stress testing. These services adhere to established norms between us and our customers to ensure quality standards.

Technical Woven Mesh Solutions

INDUSTRIES SERVED

Automotive

- Drive Technology
- Hydraulic Filter
- Filter
- EGR

Aerospace

- EMI Shielding

Pulp & Paper

- Fiber Molding
- Paper Forming
- De-watering & Filtering
- Security Watermark

Plastic & Polymer

- Fiber & Filaments

Food & Beverage

- Juicing

Chemical

- Filtration & Separation
- Distillation

Mining

- Coal washing
- Mineral separation
- FGD
- Fertilizers
- Gypsum

Energy

- Electrolysis
- Fuel Cell

Electronics

Architecture

- Interiors
- Exteriors



- Manufacturing location
- Industry specific service representatives
- Export customer presence



Learn More at
www.bvkgroup.in/hydrotech

✉ Mail info@bvkgroup.in

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