



HERALDING THE NEXT BLUE REVOLUTION IN INDIA

CONTAINERIZED FRESHWATER & BRACKISH/SEA WATER RAS FILTRATION SOLUTION

FRESHWATER

- ◆ Snakehead (Murrel)
- ◆ Sea Bass (Barramundi)
- ◆ Tilapia
- ◆ Anabas (Koi)
- ◆ Pangasius
- ◆ Grey Mullet
- ◆ Ornamental Fish
- etc...

BRACKISH/SEA WATER

- ◆ Sea Bass (Barramundi)
- ◆ Pompano (silver & Indian)
- ◆ Grouper
- ◆ Cobia
- ◆ Shrimp
- ◆ Crabs
- ◆ Ornamental Fish
- etc...



ANNUAL PRODUCTION
UPTO 100 MT/UNIT

2 PRODUCTION
CYCLES

TURNKEY
FACTORY TESTED



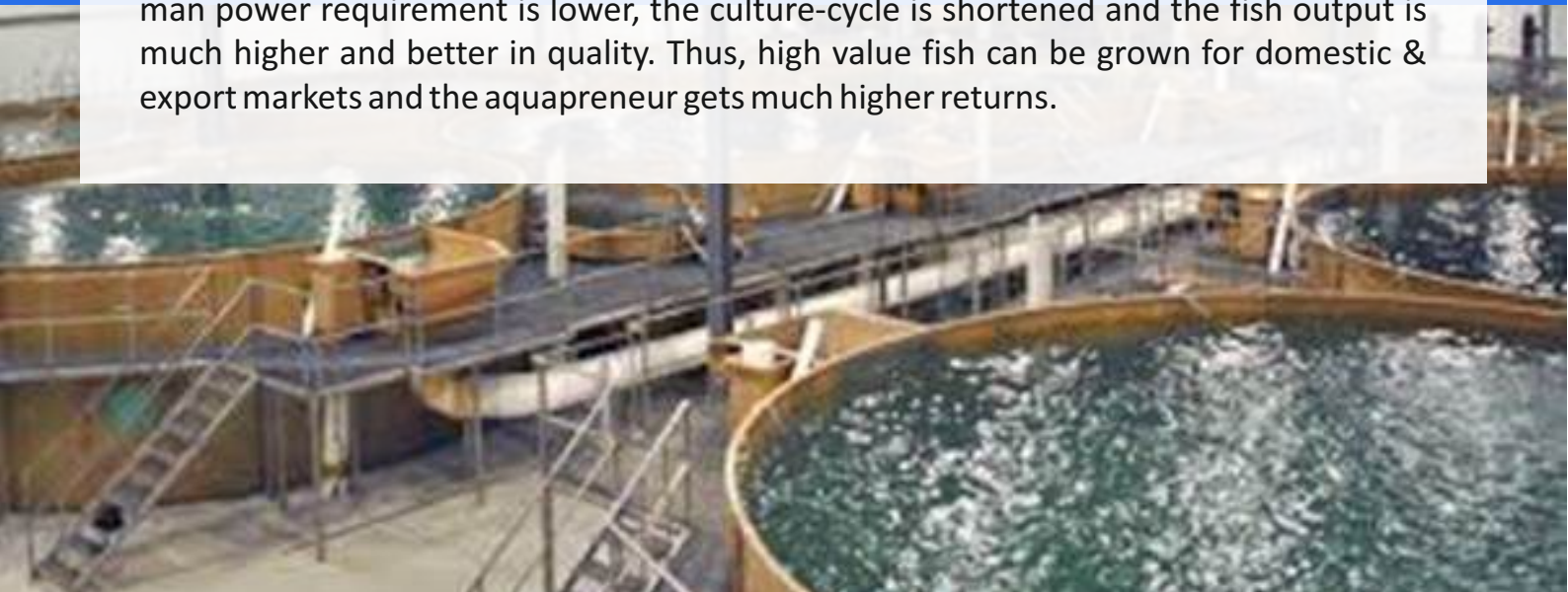
WHAT IS RAS TECHNOLOGY?

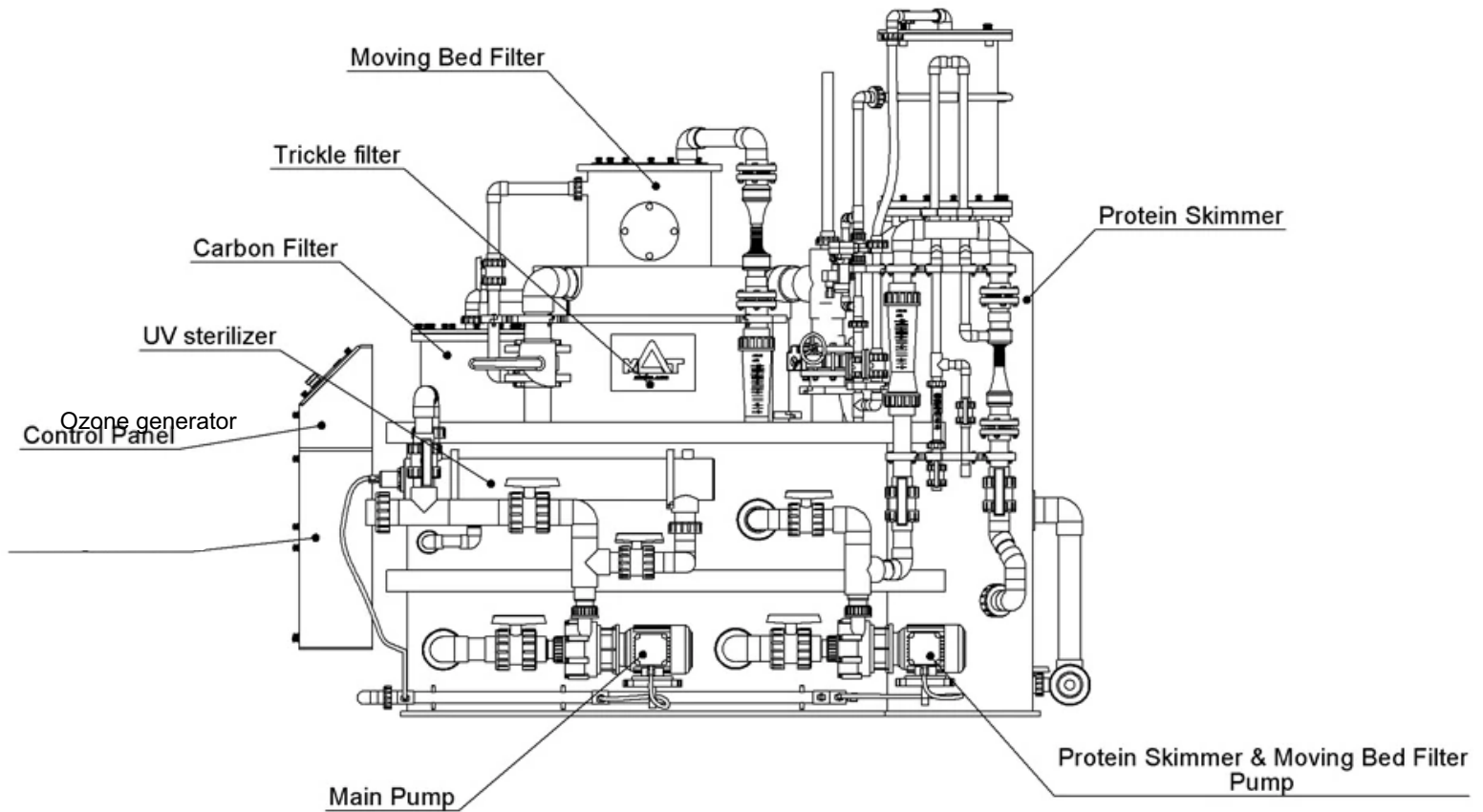
Recirculating Aquaculture Systems (RAS) allow fish to be farmed in tanks instead of open-air ponds, irrigation tanks etc. These systems allow high-density fish production within a breeding environment that is controllable by the operator of the facility. The filters of the recirculating system clean and recycle the water, sending it back to the tanks. New water is only added to the tanks to compensate for water lost due to splashing and evaporation, and to replace that used to remove waste materials.

RAS is an advanced invention which not only protects the environment, but also saves water, reducing environment pressure. In conventional pond, water needs to be filled up and water flow is necessary for fish's survival. Besides, the conventional aquaculture causes pollution to the environment, because all kinds of pollutants and wastes will sink to the pond bottom, while the pollution discharge effect is excellent in RAS.

RAS is safer and healthier compared to conventional aquaculture. On the one hand, the fish will not be affected by temperature, because heating & chilling can be done as required. On the other hand, fish will grow better with less disease and pollution that is why RAS has a higher culture density.

RAS is a cost-efficient choice for aquaculture. RAS is more profitable, as the Return On Investment (ROI) is much higher than the conventional aquaculture. The water is recirculated, the occupied area is reduced, Feed Conversion Ratio (FCR) is optimized, man power requirement is lower, the culture-cycle is shortened and the fish output is much higher and better in quality. Thus, high value fish can be grown for domestic & export markets and the aquapreneur gets much higher returns.





DESCRIPTION

Our RAS equipment is capable to deliver efficient, high-quality and scalable RAS treatment solution for modern land-based Freshwater & Brackish / Sea water aquaculture. Fully equipped Freshwater & Brackish / Sea water RAS equipment is fitted in a shipping container as a plug & play unit. This makes our system ideal for fast and hassle-free installation & operation.

Designed to support a land-based unit capable of an annual production of up to 100 MT per unit, our RAS system is fully tested at our factory, corrosion treated, insulated and equipped with cabin light, air filtration and anti-slippery floor.

MAT SKID COMPACT FILTRATION SYSTEMS FEATURES

- Protein Skimmer / Protein Fractionator
- UV sterilizer
- Ozone Generator – Ozonizer
- Oxygen Concentrator
- Degasification Bio tower / Trickle Filter
- Moving Bed Biofilter Reactor – MBBR
- Multi purpose pressurized canister
- Mechanical filtration PE socks
- Automated Skimmer Cup Wash System
- Venturi Pump
- Feeding Pump
- Automatic Foam Cleaner
- Pumps Polycarbonate cover
- Fuse box
- Level Controllers
- Flow controllers



The background image shows a large, white, cylindrical industrial water filtration unit with various pipes and valves, situated in a factory or industrial environment. The unit is mounted on a skid. The text is overlaid on a semi-transparent white box with a green header and footer.

COMPACT LIFE SUPPORT SYSTEMS

MAT Compact LSS Units are designed to provide biological, mechanical, chemical, and disinfection filtration in the smallest footprint than any other alternative filtration. The Skid Units are gravity fed with a unique energy efficient design, running all filtrations with only one low energy consuming Venturi fitted Speck pump. Designed for simple operation to achieve the best possible filtration, the Skid Systems are equipped with: High Performance built-in Protein Fractionator/ Skimmer & sludge auto wash system, Trickle Filter Bioreactor, Moving Bed Bioreactor, Multipurpose media canister - suitable for Active Carbon, Phosphate Absorption Media Bio-pellets, Ultraviolet Disinfection System, Ozone Generator System, Water Level Sensors with alarm, mechanical Flow sensors through all built in systems, Basic Functions Button Console, Venturi Pump, Feed Pump, IP64 Fuse Box, SS316 Bolts and Nuts. Our skid units are manufactured in-house from Polypropylene plastic by SIMONA AG, offering robust fabrication, appropriate for heavy duty use, made to operate in saline and humid conditions.

All units come fully assembled and hydro tested for fast & trouble-free installation on site. For optimum mechanical filtration capacity, MAT recommends the addition of an AFM pressurized filter. By installing a Pressurized Circuit system next to the Gravity System circuit, the filtration achieves optimum tank circulation through its filtration, providing energy saving and less maintenance. Optionally, all systems may come with full automation capacity, SCADA, autonomous or connected to a centralized system.

COMPACT LSS

UNITS / SPECIFICATION

Skid System	MAT Compact 30	MAT Compact 40	MAT Compact 75
Total Power (Kw)	3.5	5	10
Pump QTY	2	2	3
Skimmer Dia. Ø (mm)	630	750	950
Compact Unit Footprint (mm)	1600 2650	1865 3050	2450 3600
Max Height (mm)	2383	2500	2850
UV (gpm)	22	35	61
Compact Unit Flow @6m TDH (m³/h)	34	50	90
Max Ozone output (gm/hr)	3	4	6
TAN Removal Rate (g TAN/day)	387	595	1297
Canister cartridge (Lt)	23.5	30	54.5
Bag filters (QTY)	N/A	N/A	N/A
Outlet (Ø mm)	75	75	110
Pump Venturi	21-40/58	21-50/44	21-40/58
Circulation Pump	21-40/58	21-50/44	21-81/34
Max. Sump Level (mm)	985	1035	1215
Balance Water Volume (liter)	940	1360	2750
Standard Power Supply	415V 50Hz 3 Phase	415V 50Hz 3 Phase	415V 50Hz 3 Phase
Load kg	550	819	1200
Operational Load (kg)	3000	4443	7850
PH Probe Number	1	1	1
JUMO GMBH ORP Probe Number	1	1	1
JUMO GMBH Temperature Probe Number	1	1	1
AFM FILTRATION SKID SET ADDITION	Optional	Optional	Optional
PLC CONTROL	Optional	Optional	Optional

ABOUT COMPANY



INTRODUCTION

MAT Aquaculture Filtration was established to provide the highest possible efficient equipment and services on Recirculated Aquaculture Systems (RAS). MAT was established in 2012 in Izmir, Turkey and was founded by fish husbandry industry experts. Our expertise in animal husbandry for over 35 years is our biggest competitive advantage .

Furthermore, we understand animal behavior and we know in depth the operational needs to run a facility correctly. Our company develops and tests the equipment performance and ensures its ease of operation on our marine fish quarantine facility in Izmir. MAT has developed to become a design, manufacturing, and contracting leader in the field of RAS filtration technologies. Currently, we employ over 120 highly-skilled staff of multiple nationalities. Our organization is structured to deliver successfully completed projects on time and on-budget in any part of the world.

ENGINEERING TEAM

Our strongest asset is our engineering team, which consists of highly-skilled and motivated aquaculture engineers, marine biologists, and MEP engineers. Our engineering team has the capability to calculate and specify hydraulic requirements and specially MEP features of any RAS filtration system. In addition, MAT carries a 10 million Euro global professional indemnity policy covering all its design works. MAT designs and builds custom sized filtration equipment for RAS systems delivers the requirements of each project from plans to smoothly running facilities.

SUPPLIERS CERTIFICATIONS

We work closely with MEP vendors from Germany, Italy, Netherlands, Spain, and the USA, and we cooperate with design firms all around the world. Our R&D (Research & Development) manufacturing and assembly line is in Izmir. The facility has a built up space of over 30,000 sq.ft and is equipped with state of the art technology. MAT procures all its main components from European and U.S. manufacturers. Furthermore, MAT operates with ISO 14001 and 9001 protocols, and carries UL, SASO, and CE certification of all equipment manufactured.

SALES & SUPPORT

MAT headquarter is located in Izmir, Turkey. MAT Sales & Office Support offices are also open in Athens, Greece and Dubai, UAE. Our ERP is integrated to secure optimum after sales service for our clients, keeping in stock spare parts for immediate dispatch . All of our plastic components come with a 5 year warranty. We take pride in our clientele and commit to supporting our clients in the best possible way

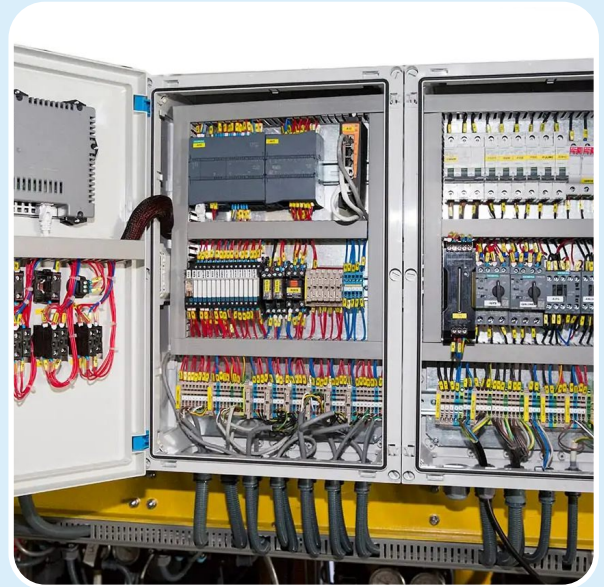


WHY CHOOSE MAT?

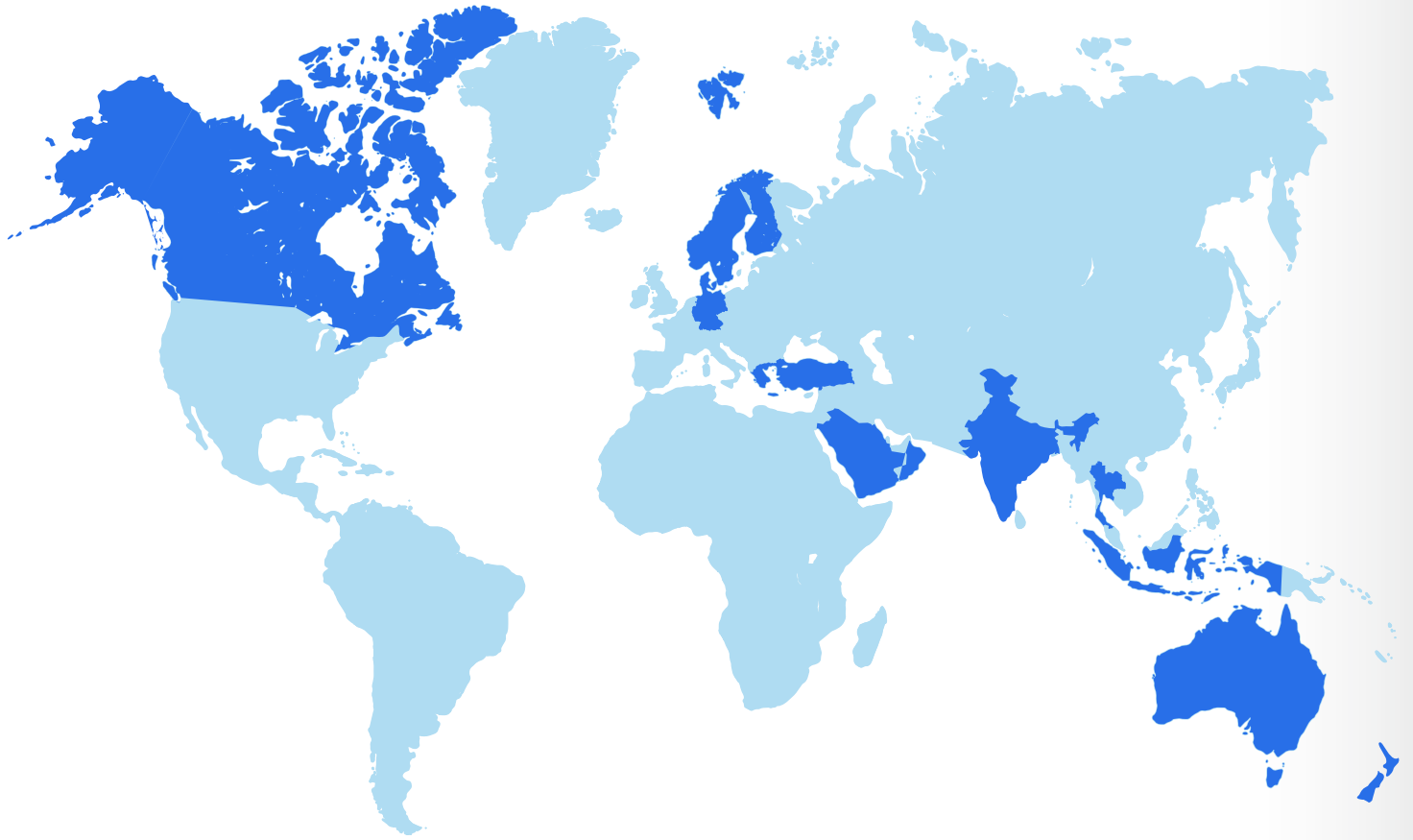
MAT's competitive advantage lies in our capacity to provide value engineering designs and in-house manufacturing to deliver robust equipment which is simple in operation & high in performance. Moreover, MAT has a vast experience in fish & marine mammal husbandry and we take pride in the engineering we provide for the well-being of the animals entrusted to our care. This deep knowledge in filtering water, led MAT to expand its filtration technology to Recirculated Aquaculture Systems. Additionally, our company has an immaculate track record of successfully completed projects around the world. Due to our understanding of the constantly changing demands of the filtration technology in RAS, we aim to offer the highest possible quality and professional approach. MAT develops its R&D on its own tanks and quarantine facility, observing closely the water parameters and the ease of operation of the systems designed. To clarify, MAT is not just an integrator who buys various components from different vendors, we are industry innovators.

RAS SKID

The Unit is equipped with High-Performance built-in Protein Fractionator (Skimmer) with optional auto-wash system. MAT RAS Unit is an integrated system consisting of all the essential equipment for Recirculated Aquaculture Systems, focusing on increased efficiency of mechanical, biological, chemical filtration and UV disinfection. RAS Skid is designed for optimized Total Ammonia Nitrogen removal rate in the lower footprint. All units come as pre-assembled modules, assembled and hydro-tested for fast & trouble-free installation on site. For optimum mechanical filtration capacity, MAT recommends the addition of an activated media filter to achieve lower tank recirculation, providing energy saving and less maintenance. The Unit is made from Polypropylene which offers robustness and durability against harsh operational conditions.



SERVICE LOCATIONS



**EXCLUSIVE
SALES & SERVICE IN INDIA**

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