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# ION EXCHANGE



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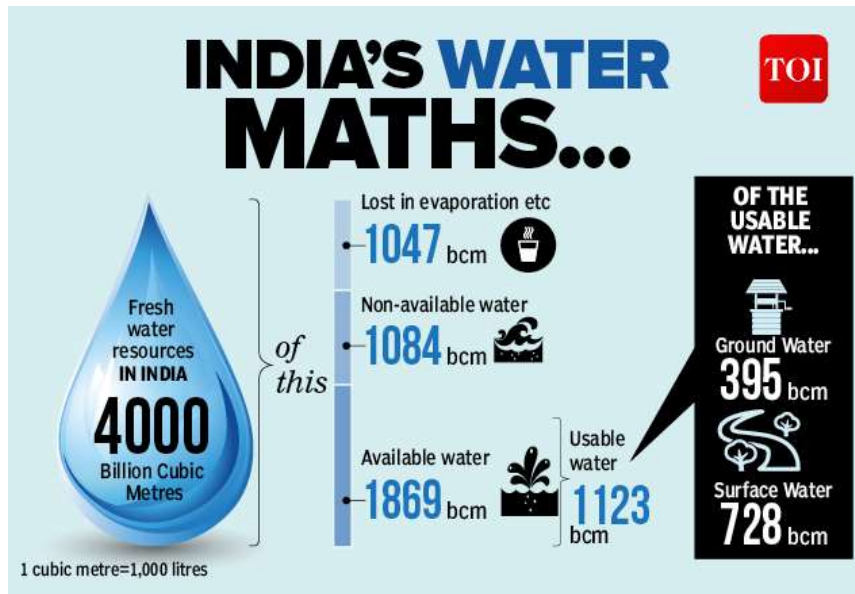
Consult your financial advisor before taking any investment decision

I own the stock in my personal portfolio

Have been wrong before. Can be wrong again

Reserve the right to change my mind

# INDIA – HIGHLY GROUNDWATER DEPENDANT



TOI



E&Y

## ...WHICH IS CONTAMINATED AND DEPLETING

Groundwater accounts for more than a third of the country's water resources

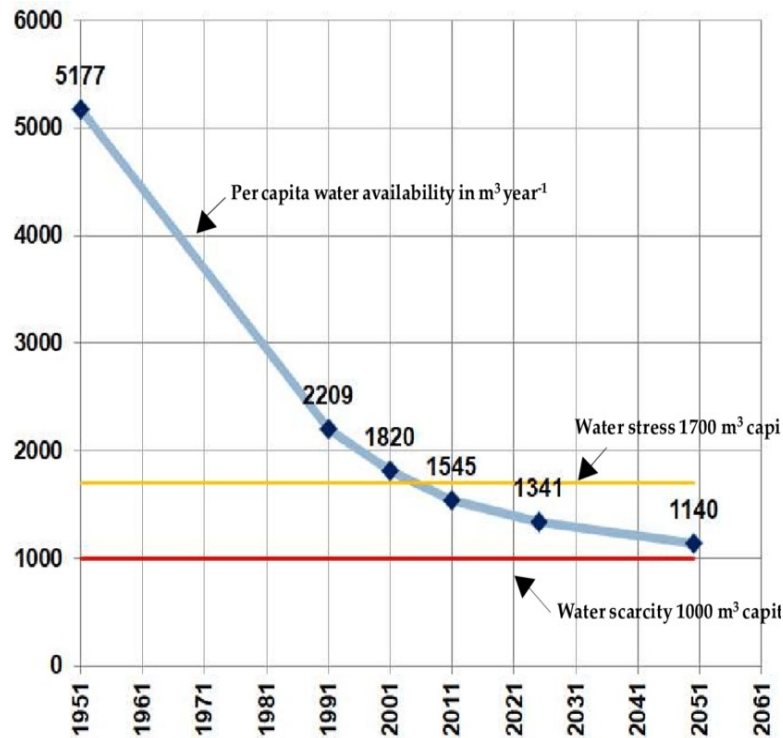
Groundwater accounts for 90 percent of the drinking water requirements in rural India and nearly 50 percent in urban areas.

India draws nearly 25 percent of the world's groundwater - That's more groundwater than China and the United States combined

Only 27% of domestic and 60% of industrial wastewater is treated

Excess drawing of ground water and low treatment increases contamination and water table depletion

# AVAILABILITY BETWEEN STRESS AND SCARCITY LEVEL



Researchgate.net

Per capita Water availability below stress levels at ~1350 cubic meters

All sectors drawing into a scarce resource

Har Ghar JAL Yojna to provide tap water to every rural household by 2024 (current 46%)

Increasing Urbanization. 0.4% of Indian population goes urban every year

Strong MSP for water intensive crops (Rice sugarcane cotton soya)

Industry demand, already growing fast seeing further acceleration (MII, China+1)

# INCREASING FRESH WATER SUPPLY REQUIRES...

Efficient utilization of surface water. Agriculture consumes 70% of the country's water resources.  
Canal / Drip Irrigation.

Increase surface water capacity. River interlinking projects.

Conservation and water capture. Jal shakti Abhiyan, Atal mission, PM Sishayee Yojna

Improve public infrastructure for solid waste and waste water treatment. Only 27% of municipal waste water is treated

Desalination through Reverse Osmosis

Increase industry compliance on water treatment

# EFFLUENT & WATER TREATMENT INDUSTRY

Water Equipment is a ~US\$2.1 bn market.  
chemicals & Purifiers ~US\$750m each.

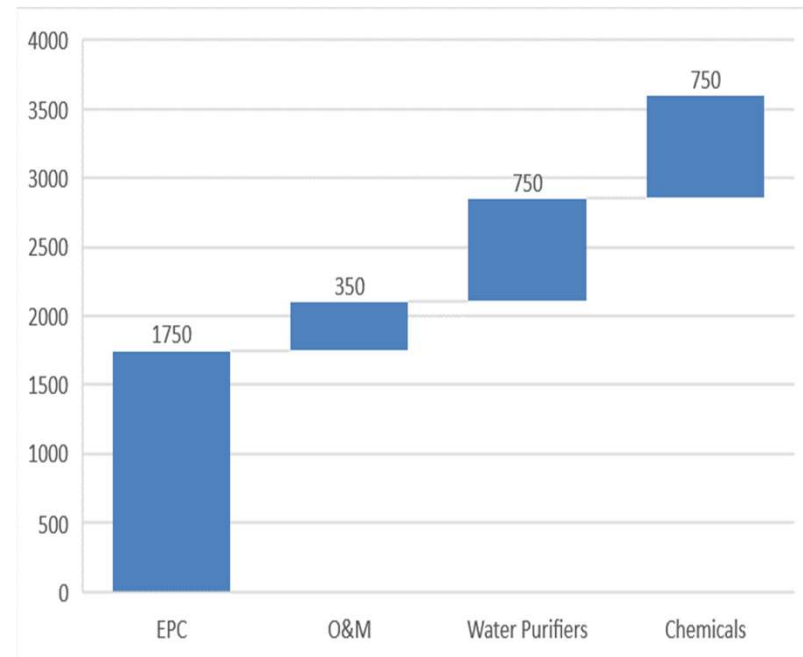
Most companies have notable exports

Concentrated with 10 players

EPC most competitive especially in municipal projects

Water purifiers seeing strong growth especially post covid

Chemicals most profitable with least number of players



# ENGINEERING TAILWINDS

Robust capex cycle in India (GFCE). Water management 4-15% of capex

Coal, Power and Refining sectors not the mainstay anymore. Increasing compliance driving demand from other industries which earlier engaged the unorganized sector

Sustainability. large buyers globally are consciously aiming to incorporate product sustainability in their value chain

A typical semiconductor facility uses two to four million gallons of ultra-pure water per day. manufacturing of semiconductors generates wastewater that contains heavy metals and toxic solvents

for every kg of hydrogen produced, 9 kg of pure water is consumed

A continuous electrical pumping membrane process can now mine lithium from sea water



# ION EXCHANGE

Formed in 1964, as a subsidiary of the Permutit Company of UK

Commenced design, engineering and supply of water treatment plants to India's industrial sector

Introduced Reverse Osmosis in India

Pioneered the production of ion exchange Resins in India

In 1985 Permutit divested their holding to employees and Vendors

Entered the Consumer Business (Under the brand ZERO B)

# FULLY INTEGRATED WATER SOLUTION COMPANY

Provides complete range of solutions for Water, Wastewater Treatment, Solid Waste Management and Waste to Energy

In-house Fabrication Unit provides Predesigned and Pre-engineered water treatment, waste treatment and process water and non-water purification systems

Leader in Membrane (sold under brand name HYDRAMEM)

Largest Resin Manufacturer (sold under brand name INDION). Produces the complete range of water and non-water based resins with applications in Pharma, Food & Beverage, Nuclear, Chemical, Bio-diesel, Hydrometallurgy, Sugar

full range of specialty chemicals for water treatment with applications in Sugar, Paper, Petro-refinery, Mining and other processes

## R&D

2 R&D Centres. Spends 0.7-1% of sales on R&D. 40+ Patents, 59 scientists

Has developed a consumer air purifier which uses resins

The new R&D centre is developing several specialised chemicals for water treatment which are being commercialized

Can work on projects involving LITHIUM extraction from sea Water

Capable of working on ultra pure water for semiconductors

Working with all major players evaluating green hydrogen

# PROFITABILITY & BALANCE SHEET FOCUS

## In the 90s and 00s

Bid for government projects in the - Poor profitability and bloated working capital

Expanded globally through 18 Subsidiaries.

Market share erosion and losses in water purifier business

## In the 2010s

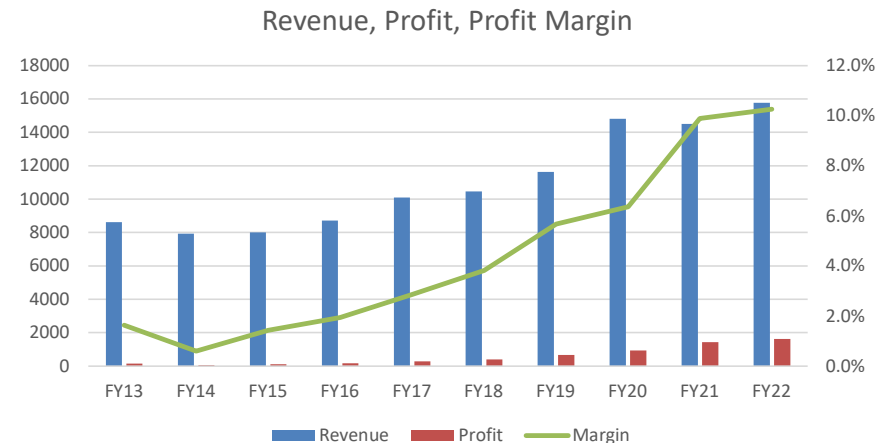
Focus mostly on corporate projects. Shrunk the global footprint. Subsidiaries profitable

Industry high Profitability and Negative W/C

Focus on product differentiation and premium end of the market in water purifiers

PBIT margins	ION	WABAG	THERMAX
Engineering	11.4	7.1	
Chemicals	21.7		3.3*
Water Purifiers	-2.7		

\* Environmental segment (includes air pollution products)

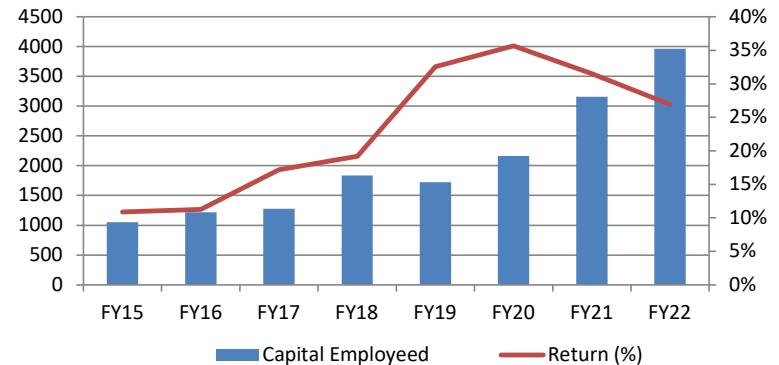
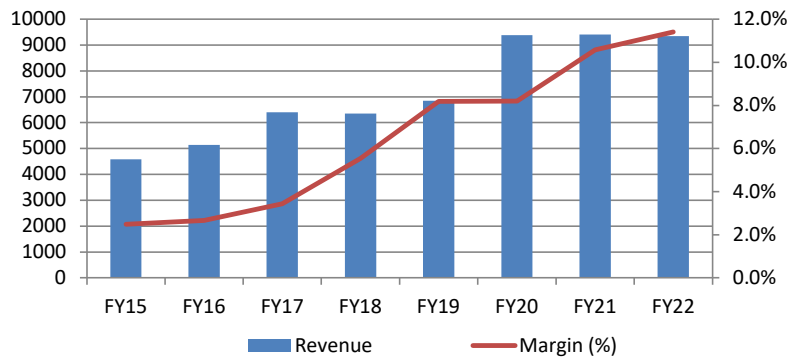


# ENGINEERING — FOCUS BACK ON GROWTH

Earlier focussed on small orders, has successfully implemented two large orders from Vedanta (Rs4.4b) and Sri Lanka govt. (Rs1.2b) over last 3 years. Currently bidding for multiple large projects

Has avoided B2G in the past. signed up Rs10bn order for UP JAL Nigam (modular). Didn't participate in Namami ganga

Order book up 2.7x in the last 15 months to 29bn. 3x FY22 sales. Bid Book up 2x to 80bn



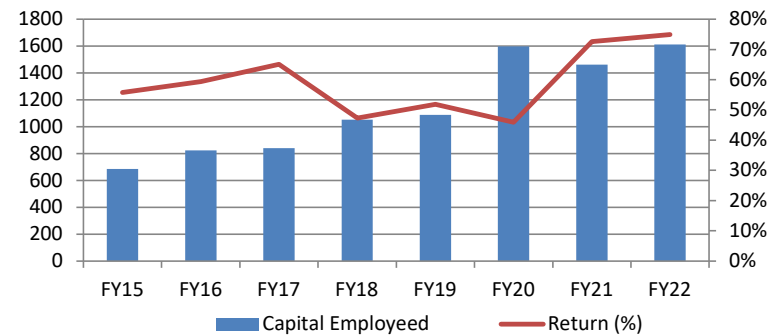
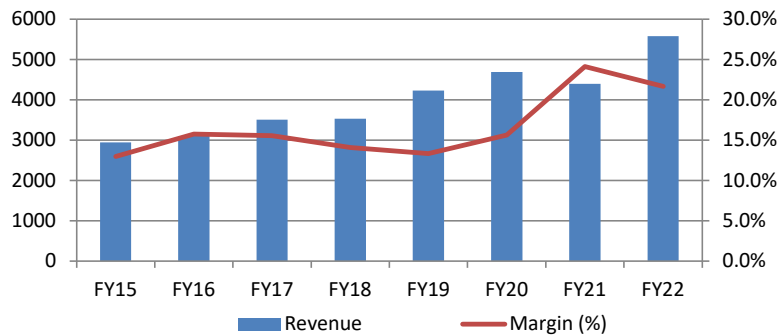
# CHEMICALS

Only player with full range of specialty chemicals, resins and membrane for water treatment

Beneficiary of china+1. Strong growth in exports

Expanding capacity across the full range of products including a Rs2bn greenfield plant for resins and Rs0.5bn for membrane

ROCE of +60%



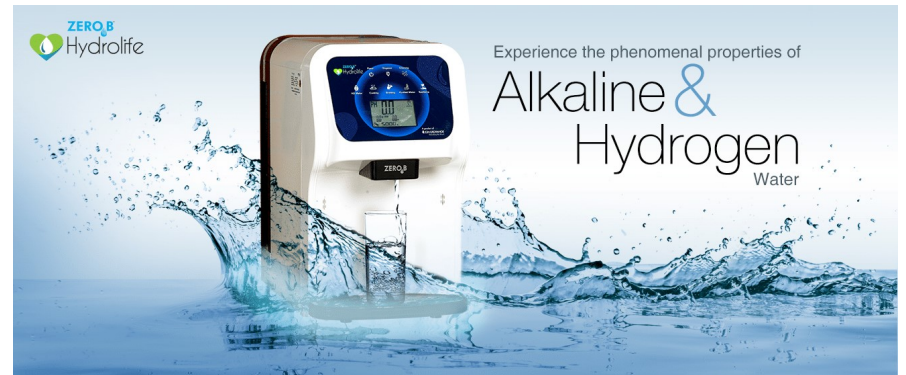
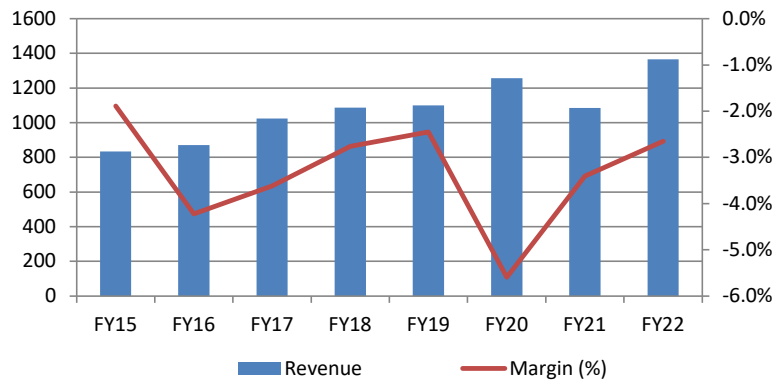
# CONSUMER

Zero B – Great product that lost out to cheap alternatives and good marketing

Focus on product differentiation and premium end of the market

Turned around the business in 1QF23. expecting strong growth this year

Launched Hydrolife #craftyourwater. Antioxidizing water



# GROWTH + VALUE AT INFLECTION

Capex in the next 18 months more than last 10 years combined

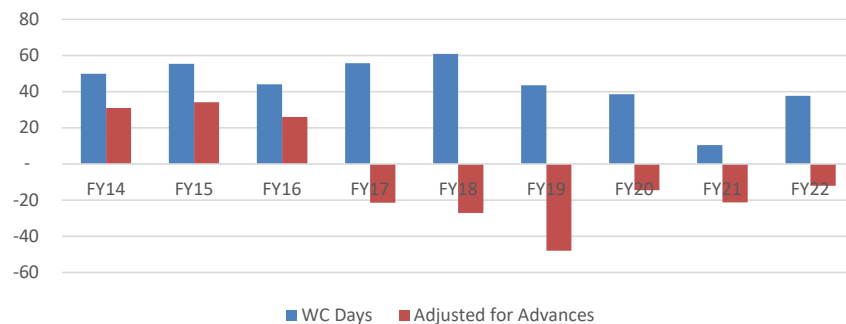
EPC orderbook highest ever. Consumer business turned and poised for growth

Only engineering company with price to earnings in the teens and ROCE +30%

Negative working capital, net cash (20% of market cap)

3yr avg OCF yield 5.9%, 3yr avg FCF yield 5.2%

Net Working Capital



Net Debt (Cash)

