

# Indian market



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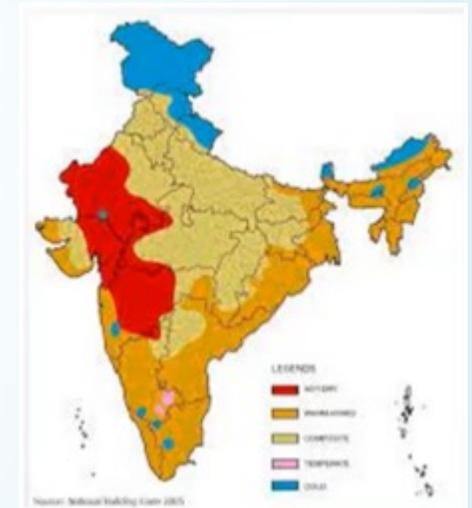
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# Indian market

- USD 2 trillion economy rapidly expanding with 6/7 % annual growth
- HVAC Market Figures by BSRIA ,Eurovent and CII projected at \$ 20 B/Year
- \$9B is Split AC, followed by HVAC Service and then equipment like chillers, AHU's, fans, packaged units and computer room units
- Water-cooled and air-cooled chillers market for major global manufacturers is 1Billion USD / Year
- Water-cooled are predominantly AHRI certified for large players

# Indian market

- Air-cooled by 'BLUE-BOX' with Eurovent Certification has large number of models in BEE India list. Climaveneta is another major European player
- AHU's are PREDOMINANTLY of 'Double-Skin-Design' per european design since 2000. Prior to this followed US Carrier 39 series design
- Cooling only is major part of HVAC Market; with RED areas being HOT & DRY and DARK Brown Areas being HOT and HUMID



# Indian market

- With more sophisticated projects being designed with LEED / IGBC Green Building Certification, AHUs are expected to graduate from FILTER/COIL/FAN configuration to those with energy recovery
- Major thrust for incorporating 'EVAPORATIVE COOLING' and standards being set by Bureau of Indian Standards
- ISHRAE has developed AHU standard on similar lines as EN
- AHRI has expanded operations since 2019 for Chillers and AHU's

# Indian market

- Emphasis on quality will increase in coming years
- More quality jobs following energy and equipment standards
- Energy recovery % will increase
- Emphasis on HVAC energy related standards and indoor air quality is increasing



## COP26 commitments

# Indian market

- New international airports
- Healthcare facilities in expansion mode
- Microchip building facility – major thrust by GOI
- Pharma industry expansion
- Defence equipment production facilities
- Pack-houses and food related facilities
- Star rated hospitality – over 100 under plan
- Textile industry in growth mode
- Software and back-office business

**HVAC Equipment Market  
PROJECTED to grow at 14% CAGR  
in India**



# Indian market

- Number of AHU manufacturers is increasing – big names like DAIKIN are buying small manufacturers like CITIZEN and getting into the market
- Organic Indian manufacturers like ZECO and EDGETECH are looking for certification so they can participate in large jobs that have international specifications.
- In the absence of ISHRAE/RAMA AHU standard being endorsed by BIS (work-in-progress) specifiers tend to allow multiple international standards to enable competition. Important to have complete performance standard brought in for other standards

# Indian market

## Focus on specifying :

- System effect based performance and complete unit sample testing as part of certification requirement (AHU is not = sum of components)
- Energy recovery
- Breakout sound data ( part of indian iaq standard is 'noise levels in space', which needs this)
- Filter by-pass efficiency

AHRI 410 and 430 to correct for cabinet and system effect, ensuring you get real fan and motor performance data – including factory-tested maximum leakage rates per SMACNA guidelines. And we provide sound data for every model of our Solution™ air handlers per AHRI 260, the only standard recognized in the industry for accurate prediction of air handling sound pressure. Depending on the

# Indian market

- Enhancing interaction with **'specifiers'** and engaging high-end 'end-users' pays dividends in the Indian market.
- Indian brands like ITC / TAJ Hotels / Oberoi Hotels/ Infosys / TCS / Wipro / Cipla /Dr Reddy / Max Hospitals / Apollo Hospitals / Raymonds / Patanjali / Reliance Retail / Larsen and Tubro / Tata Motors / Airtel / Hero Motors / Maruti, **do not buy equipment based on price only**
- Indian Govt. sector like DMRC / ISRO / BARC / DRDO / NTPC / ONGC / GAIL / EESL / BHEL / IIT / IAAI have **'life cycle cost'** analysis done and do not base their buying decision on price

# Indian market

- Indian industry considers that India will not be a winner in producing 'cheap and no-spec products' as they will be outdone (see example photos of no-spec equipment on slide 13 and 14)
- Industry rewards international and Indian players who bring in **better technology, education and raise standards**
- **India is extremely serious about its 'energy related commitments' made by its leaders**



**RISK OF 'CERTIFIED  
COMPONENTS + CASING  
CHECK = CERTIFIED AHU'**



# Thank you!