

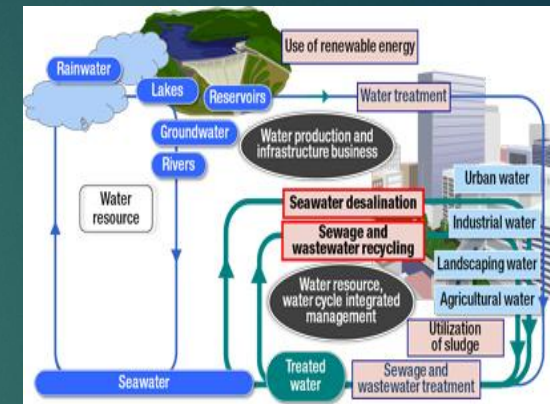
Detail of our services by Discipline

1

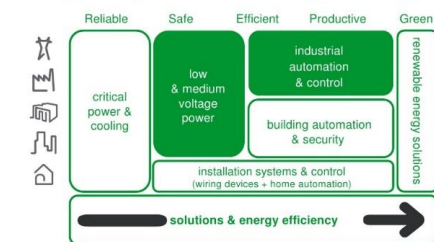
► Mechanical Engineering

► Integrated Energy Efficiency Solutions

- High Efficiency equipment selection
- Control strategies and operation schedules
 - Operation parameters, conditions, set points, occupied status, non-occupied status, pressure, temperature, flow, etc.
- Chilled Water Reset Strategy
- Water recycling
- Waste heat management - any fluid cold or hot
- Heat recovery
- Retrofit to existing infrastructure
- Building Envelope
- Lighting, fixtures and sensors



... with the most comprehensive and integrated portfolio in energy management



Schneider Electric - 8885 801 81 June 2009

■ Historical presence □ New businesses

Detailed scope of our services by Discipline (cont.)

2

► Mechanical Engineering

Piping Systems

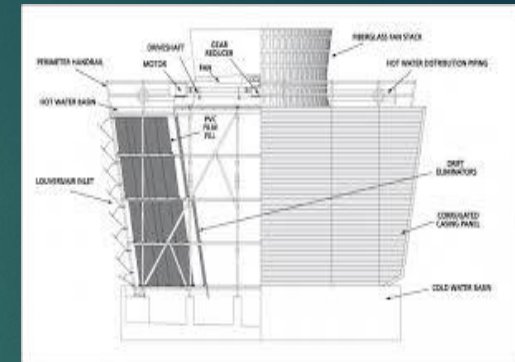
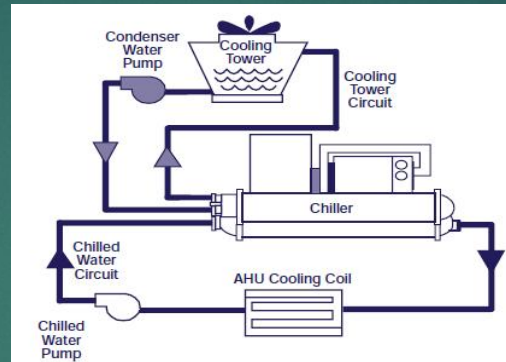
- Chilled water, cooling tower water, compressed air, vacuum systems, steam, medical gases, potable water, steam condensate, sanitary process, purified water, etc.



Detailed scope of our services by Discipline (cont.)

3

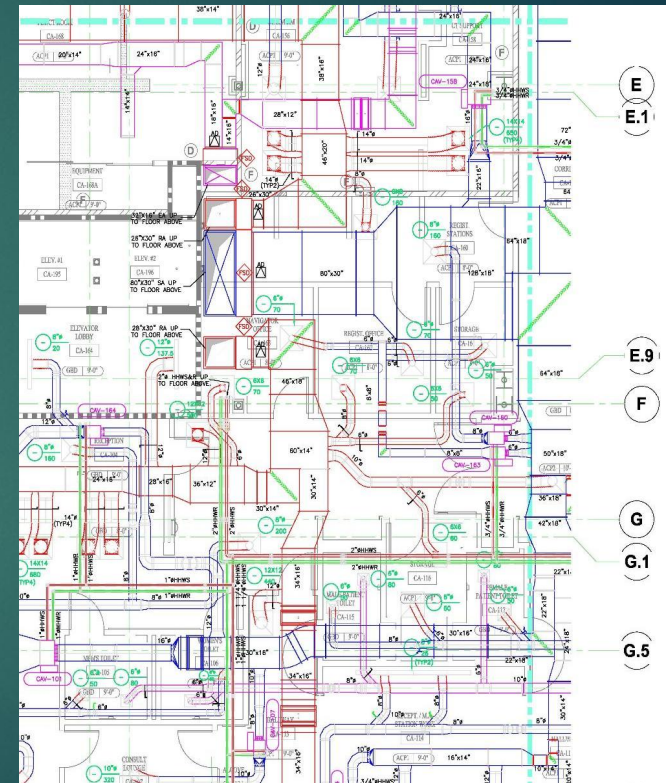
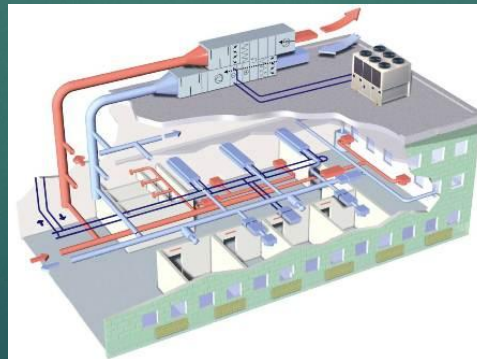
- ▶ **Mechanical Engineering**
- ▶ **Air conditioning or process Water side;** industrial, commercial, pharmaceutical, chilled water systems, air cooled and water cooled



Detailed scope of our services by Discipline (cont.)

4

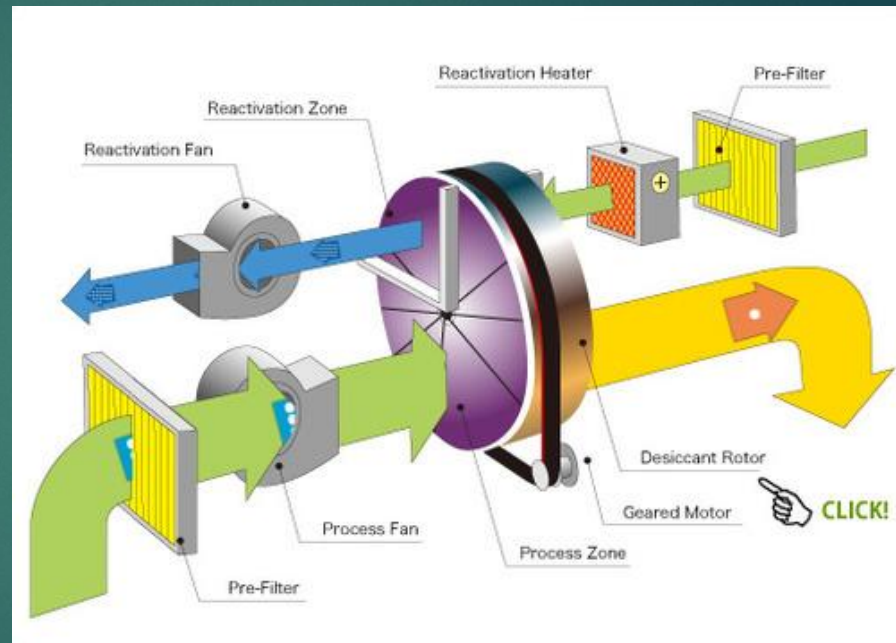
- ▶ **Mechanical Engineering**
- ▶ **Air conditioning air side**; industrial, commercial, pharmaceutical GMP and non GMP



Detailed scope of our services by Discipline (cont.)

5

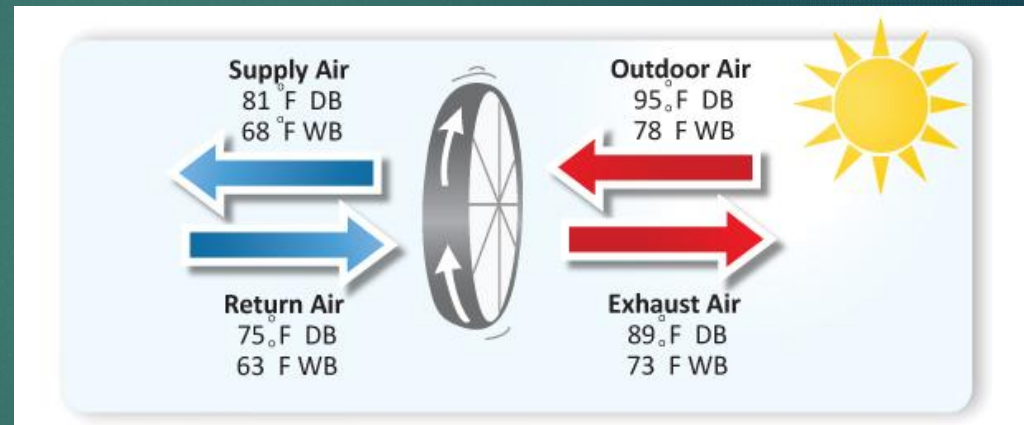
- ▶ **Mechanical Engineering**
- ▶ **Air conditioning air side, temperature and low humidity controlled** ; industrial, commercial, pharmaceutical.



Detailed scope of our services by Discipline (cont.)

6

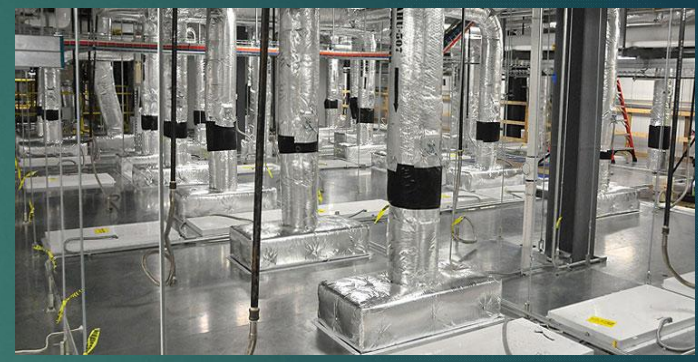
- ▶ **Mechanical Engineering**
- ▶ **Air conditioning air side heat recovery;** industrial, commercial, pharmaceutical.



Detailed scope of our services by Discipline (cont.)

7

► Mechanical Engineering – HVAC and Utilities design for Clean Rooms

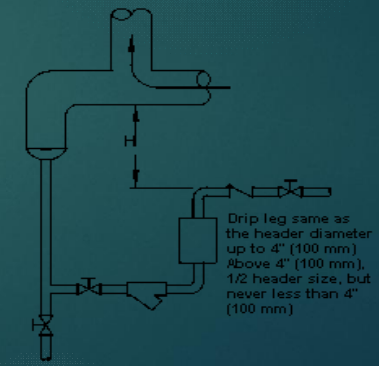
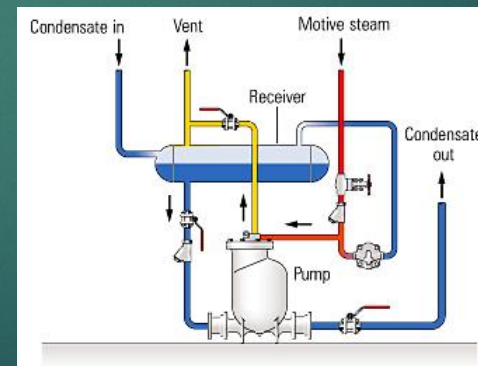
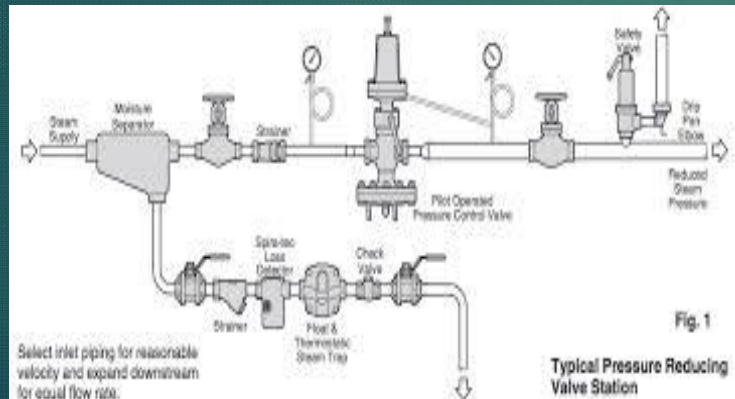


Detailed scope of our services by Discipline (cont.)

8

► Mechanical Engineering Steam

- Steam and hot water boilers
- Condensate return management
- Assessments and system design



Detailed scope of our services by Discipline (cont.)

9

► Mechanical Engineering – Dust Collection

- Industrial and pharmaceutical
- Equipment selection and system layout design



Detailed scope of our services by Discipline (cont.)

10

► Mechanical Engineering - Plumbing

- Supply and discharge of domestic and industrial water

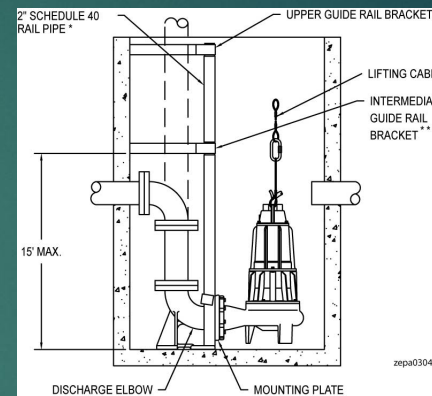
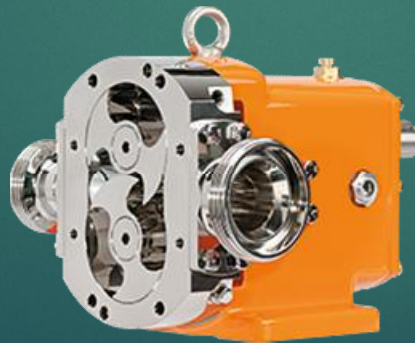


Detailed scope of our services by Discipline (cont.)

11

► Mechanical Engineering

- **Pumping Systems**
- Energy improvements
(in addition to VFD's)
- Analysis and Troubleshooting
- Hydraulic Optimization
- Systems Design

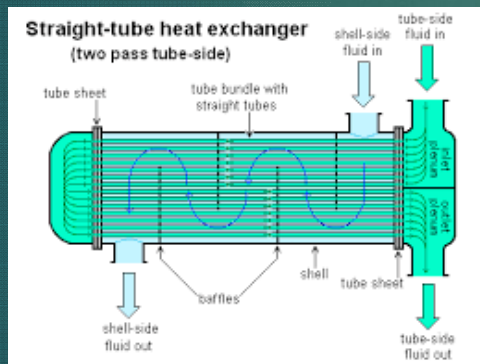


Detailed scope of our services by Discipline (cont.)

12

► Mechanical Engineering – Heat Exchangers

- Utilities
- Process
- Waste Heat Management (energy recovery)



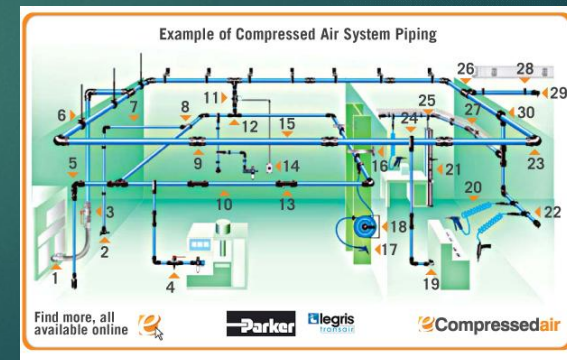
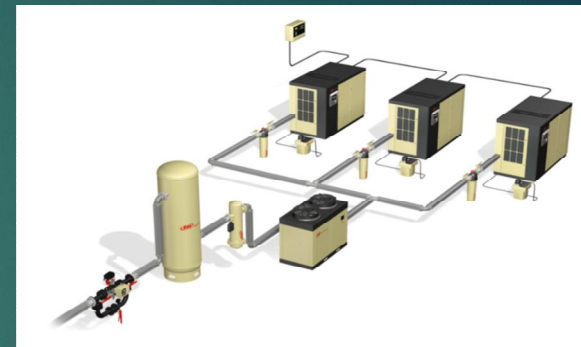
Detailed scope of our services by Discipline (cont.)

13

► Mechanical Engineering

► Compressed Air Systems

- Pneumatic Optimization
- Energy improvements
- Systems Design
- Assessments

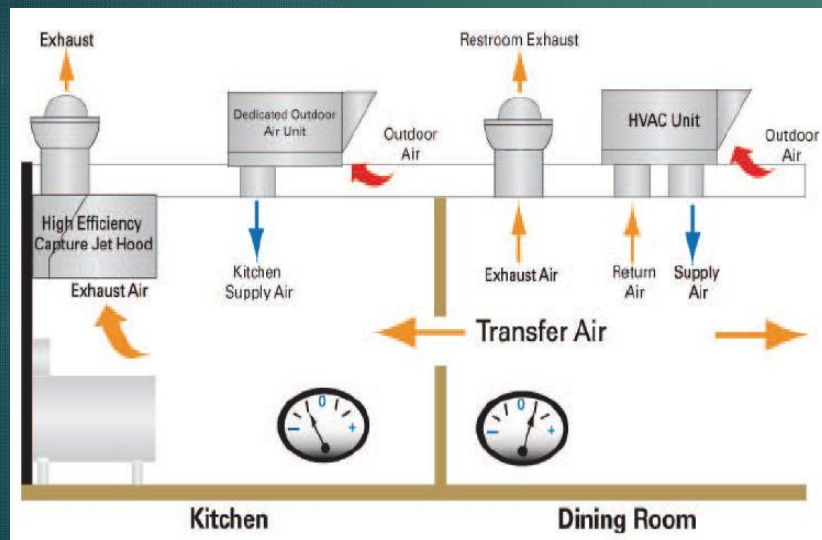


Detailed scope of our services by Discipline (cont.)

14

► Mechanical Engineering – Kitchen HVAC and mech. ventilation

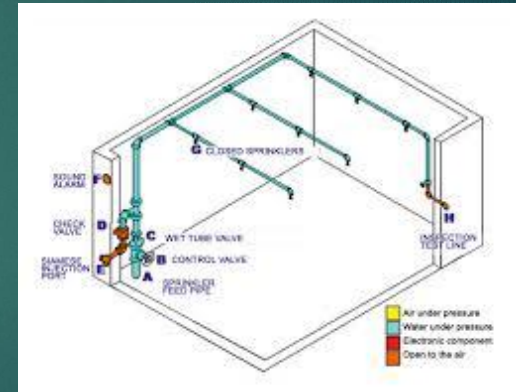
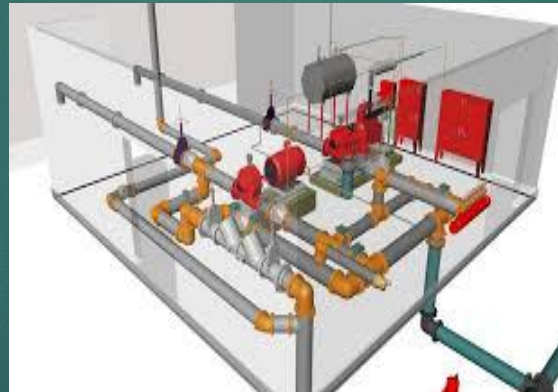
- Design and improvements for Institutional, Commercial and Industrial kitchens (restaurants, hotels, hospitals, mfg. facilities etc.)



Detailed scope of our services by Discipline (cont.)

15

- ▶ **Mechanical Engineering - Fire protection systems**
 - ▶ Design
 - ▶ Wet and dry systems, computer rooms, suppression, dry chemical, foam systems
 - ▶ Code compliance analysis



Detailed scope of our services by Discipline (cont.)

16

▶ Mechanical Engineering - Assessments

- ▶ Capacity analysis for utilities – Chilled water, compressed air, Steam, etc....
- ▶ Consulting for Indoor Air Quality (IAQ), code compliance
- ▶ HVAC sound issues (class rooms, offices, auditoriums, theaters, etc.)
- ▶ Assessments for reduction in electric energy consumption on DX and Chilled water air Conditioning Systems, air compressors, Ahu's, pumps and others, etc.... using **Integrated Energy Efficiency Solutions**

Most Relevant Projects: Mechanical Engineering

PR Housing Department Building, Rio Piedras, PR

1. HVAC energy assessment and design including two 400 tons chillers, pumps, rehabilitation half of 50,000 cfm heat recovery wheel, dehumidification coil, etc. This project had **savings in excess of \$25K per month.**

First Hospital Panamericano Hospital, Cidra, PR

2. HVAC Upgrade, system design including chillers, pumps, kitchen a/c, almost all air handlers, all fan coils and huge improvements to indoor air quality.

Bristol, Myers, Squibb – Manatí, PR

3. Energy assessment and design for addition of new 1,250 tons water cooled chiller and cooling towers for replacement of three old low efficiency 750 tons chillers with their corresponding pumps, cooling towers and piping

Pfizer, - Vega Baja, PR

4. Design of a Low-humidity GMP a/c for two packaging lines rooms, including dust collection, chilled water, steam, plumbing, compressed air and re-heat water piping

Most Relevant Projects: Mechanical Engineering

Novartis – Exlax – Humacao, PR

5. GMP Improvements project (phase I and II) including 450 tons chiller, cooling tower, new primary and secondary pumps, new tower water pumps, piping and plumbing systems, compressed air, chilled water, re-heat water and ancillary accessories
6. Capacity assessment and design for replacement and capacity increase (60 to 100 HP) of existing Hot Water Boilers system including controls, piping and exhaust chimney
7. Capacity assessment and design for replacement of two 175 HP air compressors. After Capacity assessment and suggested operations scheme, Two 125 hp units were specified, this project produced huge energy savings.

Sam's Mayagüez, PR

8. HVAC, piping, plumbing and fire protection system

Pfizer – Carolina, PR

9. Design of a fuel supply system, ceiling mounted dry chemical fire protection system, piping, mechanical ventilation and office air conditioning to four (4) 2,500 KVA generators building

Most Relevant Projects by Discipline: Mechanical Engineering

Pfizer – Barceloneta, PR

- 10. Design HVAC system and dust collection for GMP 100,000 class room

Wyeth – Guayama, PR

- 11. Design HVAC systems and "piping" for the main chemical laboratory

Kikuet Products – Canóvanas and Carolina, PR

- 13. Specification and design of two **Blast Freezers** Refrigeration equipment to support manufacturing activities

Bristol, Myers, Squibb – Humacao, PR

- 14. 37,000 GPM cooling towers systems (21,000 and 16,000 gpm's) conceptual mechanical design, 150 hp vertical pumps, concrete basin, 36 in. discharge header for facilities chillers, air compressors and other utilities.....

Contact Information:

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Thanks for this opportunity

A GOAL
WITHOUT A
PLAN IS JUST
A DREAM.
-dave ramsey