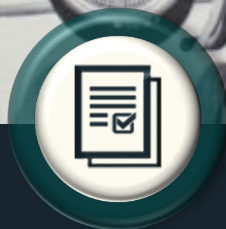


Chilled Beams





Energy
& Environmental
Focus



Patented &
Certified
Products



U.S & Global
Footprint



Engineered
Air Quality &
Data Center
Solutions



Engineered
Air Distribution
& Sound
Solutions



OEM,
Key Account &
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Service
& Support

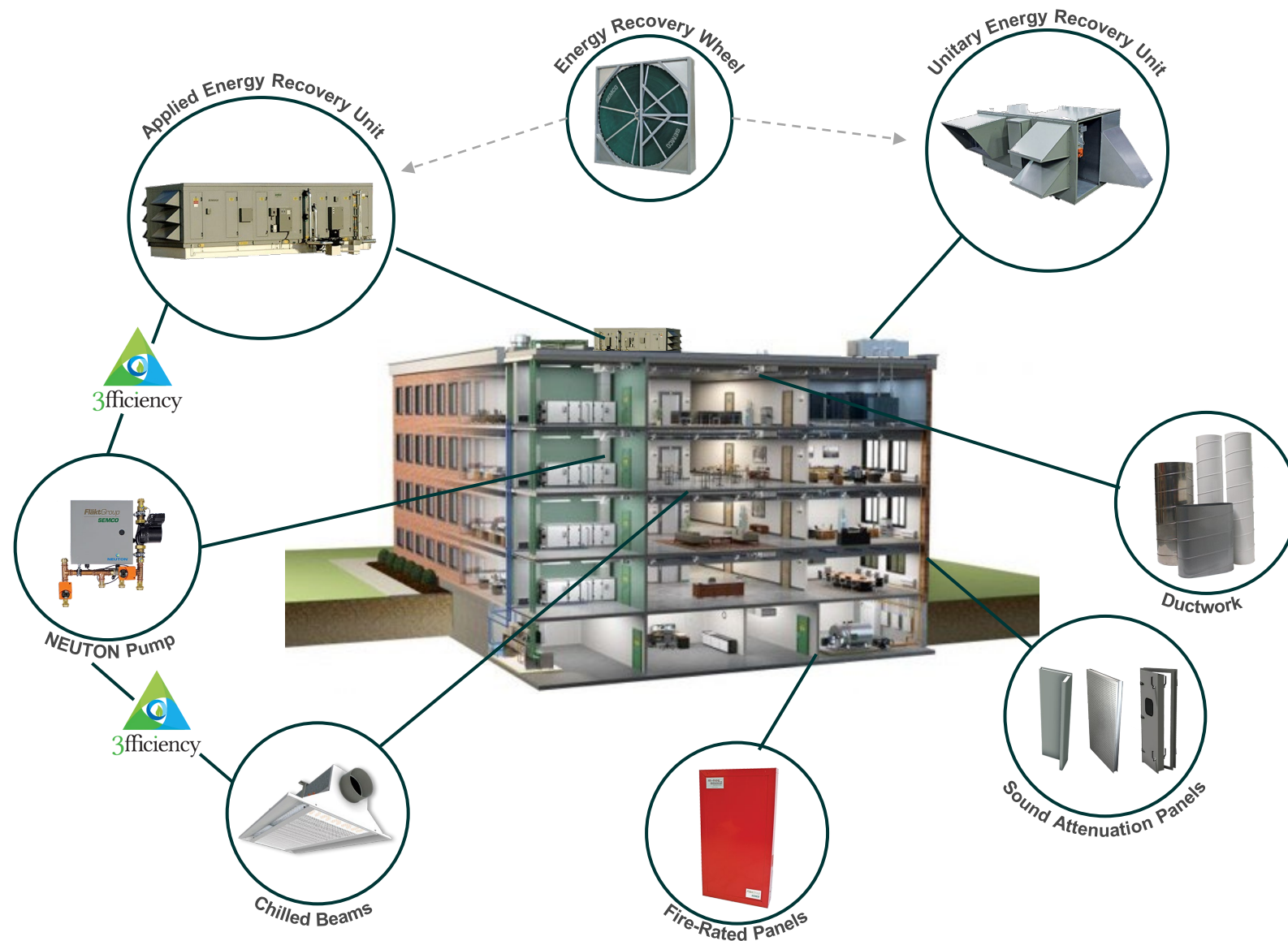


Award Winning
& Industry
Recognized

Who we are & what we do

FläktGroup
SEMCO

FläktGroup SEMCO Products For Commercial Applications



Education



Offices



Healthcare & Labs



Manufacturing & Automotive



Public Buildings & Entertainment



Sports Facilities

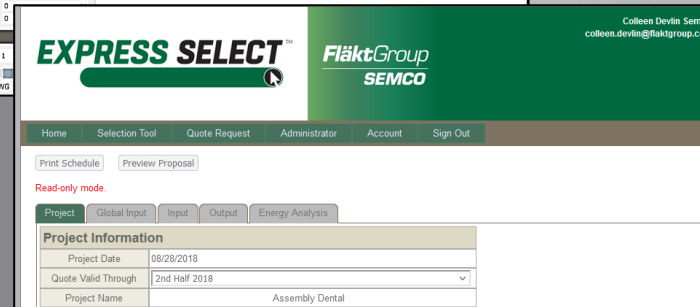
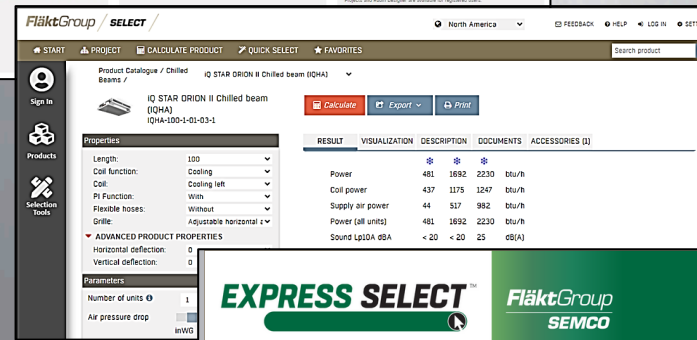
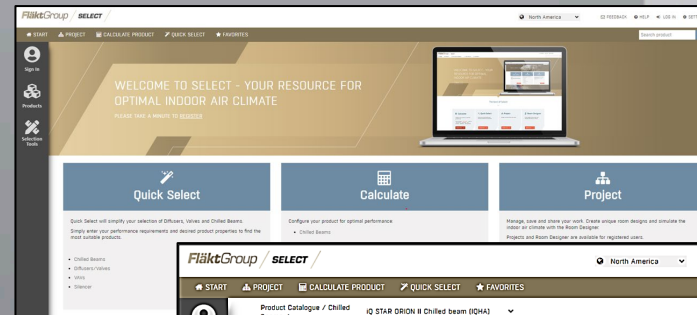


Datacenters





FläktGroup SEMCO Superior Sales Support & Service



What are chilled beams?

Chilled beams combine radiant cooling with conventional overhead ventilation to:

- Reduce energy usage
- Improve comfort levels
- Reduce the architectural impact of ductwork and other mechanical systems

Designed for non-residential applications where there is a high temperature load and/or rooms that require individual comfort control.

Chilled beams often are used in lieu of a fan coil unit.





ENVIRONMENTALLY FRIENDLY

- Improves the indoor environment with a low velocity (draught-free) solution
- Low noise level to surrounding area



ECONOMICAL & ENERGY EFFICIENT

- Lower airflow means that you can use a smaller AHU
- Low temperature gradient — more uniform room temperature



EXPERTISE DRIVEN

- No fans, no filters & no drain for condensation means that less maintenance is required over time



FULLY MIXED AIR

- Low-temperature gradient



LOW NOISE

- No fan in Chilled Beams



FRESH AIR

- Right humidity & temperature



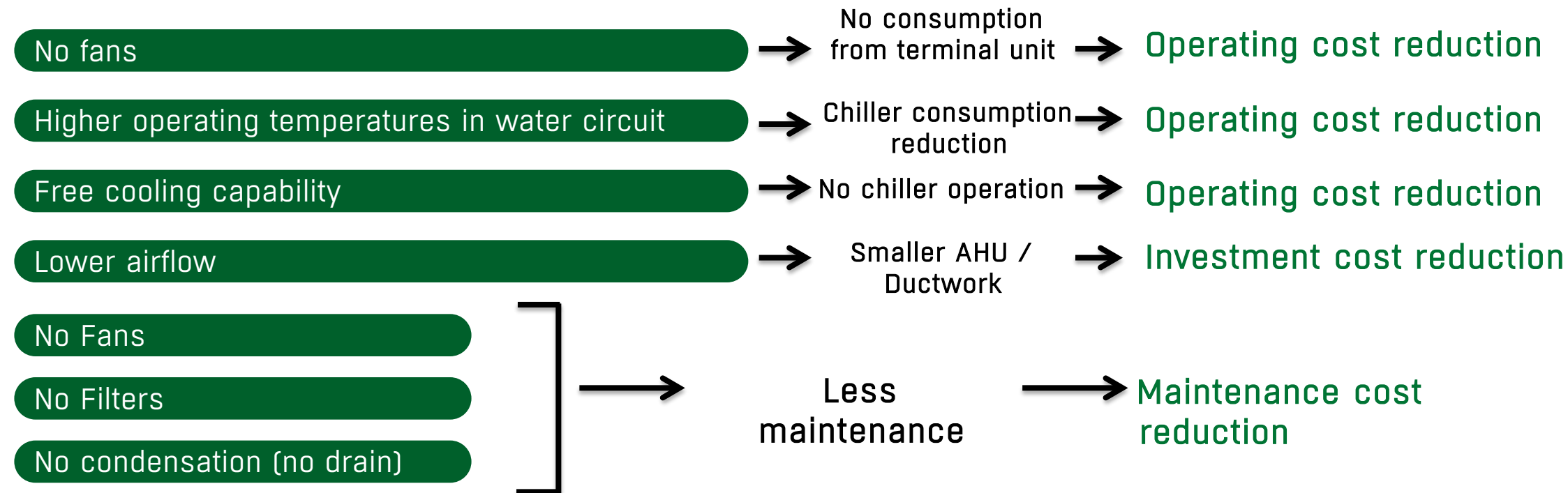
EVEN AIR DISSEMINATION

- No pockets of concentrated air

Chilled Beam Benefits: Energy Savings

- **Reduced fan horsepower**
- **Load matching** (only use space cooling if required)
- **Water Cooling:** ~ 75% of cooling handled by higher capacity water rather than by having the full load handled by air
- **Increased Chiller Efficiency:** Chilled water temperatures in chilled beams operate at higher water temperatures than fan coil systems. Chiller energy consumption with chilled beam systems provides ~35% energy savings.
- **Free Cooling:** When outside ambient air conditions are sufficiently dry and cooler than the return water temperature, energy can be saved in the chiller and primary air supply by using outdoor air.

Lower Life Cycle Cost Solution



$$\text{Lower energy consumption} + \text{Lower Maintenance} = \text{Low LIFE CYCLE COST}$$



JUNO IQHC

Highest cooling with
lowest air & water
pressure drop



LYRA II IQCC

Low noise level with
high flexibility & high
cooling capacity



NOVA II IQFI

Exposed active chilled
beam suitable for
many ductwork
system types



AURORA IQSA

Narrow 1-foot-wide
active beam for
ceiling mount



ORION II IQHA

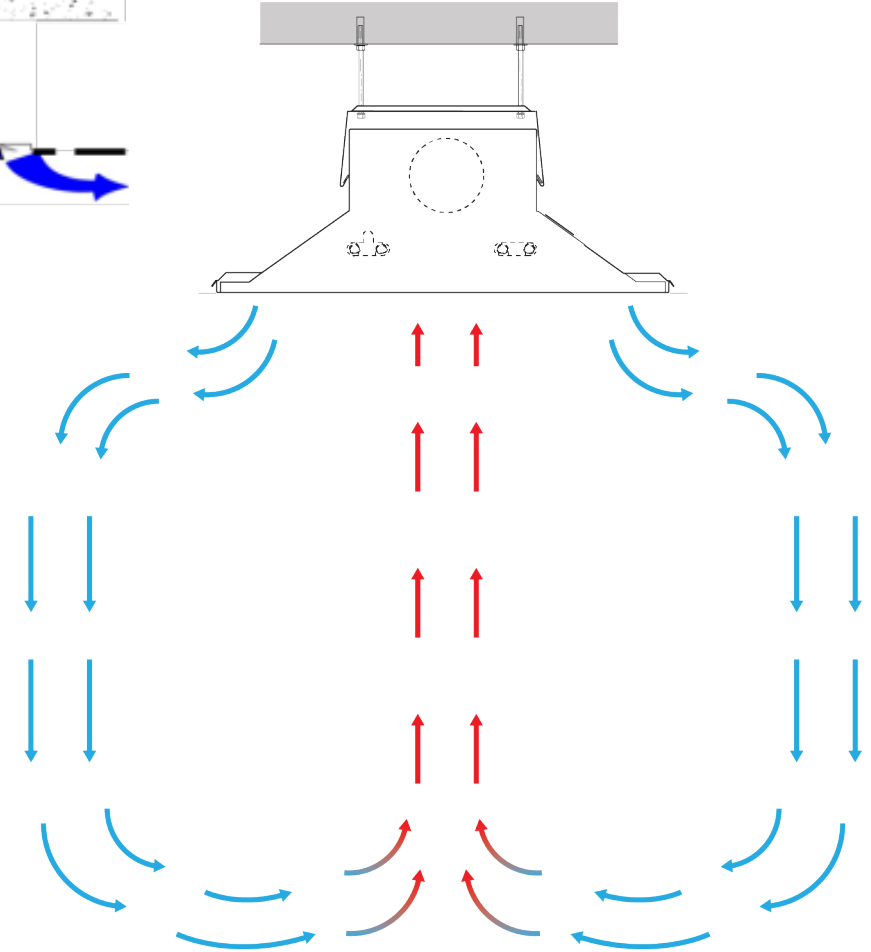
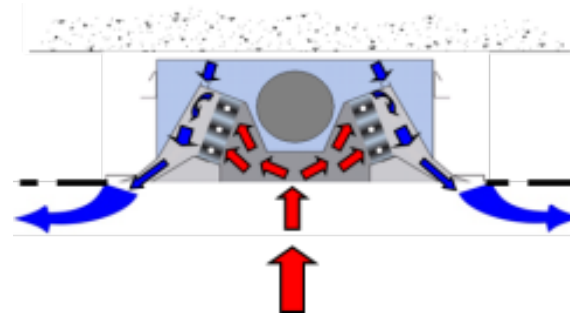
Very low noise level –
perfect for hotel &
hospital rooms



NEUTON

Active condensation
control for chilled
beams

- The “engine” is the induction created by the adjustable slots.
- Cooling and heating modes
- The fresh air is supplied through the chilled beam.
- Mixing air diffusion into the room so the air velocity is controlled.



Active chilled beams provide heating, cooling and ventilation with high comfort.

Juno IQHC – Active Chilled Beams

- Highest industry cooling capacity with the lowest air and water pressure drop
- Diffusion system allows for customized comfort control with adjustable induction, flow pattern control and twelve configuration slot settings
- Flexible, universal air & water connections
- Available with less than 20 dB of sound level which provides practically silent operation
- Significant energy savings
- Ease of installation
- Made in the U.S.A
- Available in 2' wide X 2'-10' long (length in 1' increments)
- Air flow range: 19 – 267 CFM



- **Cassette – Active**
- **Easily-adjustable four-way throw**
- **Comes in 2' and 4' lengths**
- **Ceiling grid or with shroud for exposed**
- **Grill height is adjustable to maintain throw distance**
- **Pi functionality - Pressure independent demand control ventilation (DCV)**
- **Nozzle change can be actuated to match airflow to occupancy level and kept at set values regardless of pressure changes in ductwork, saving energy, based on:**
 - Occupancy
 - CO2
 - Temperature



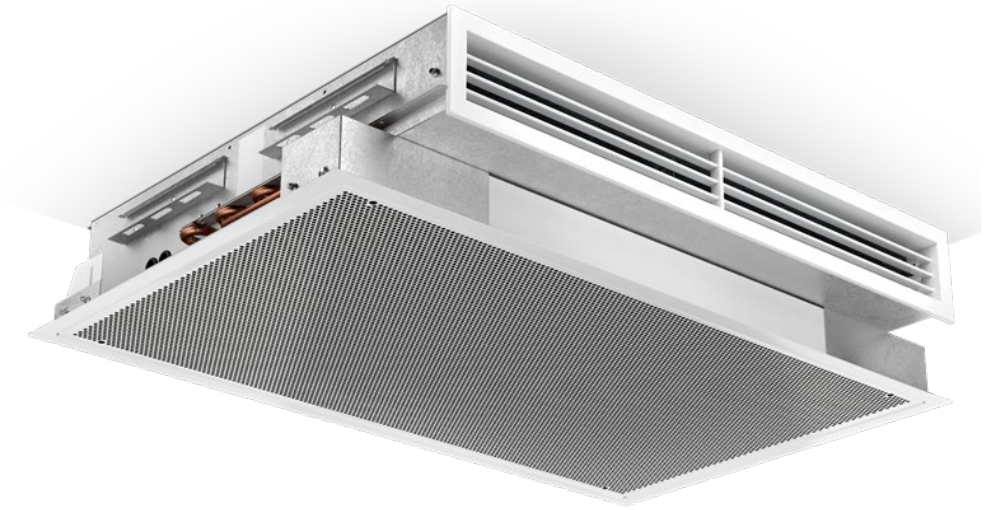
- **For exposed applications - active**
- **Available with Pi function**
- **High flexibility**
- **Easy installation**
- **Demand controlled ventilation (Motorized Nozzles)**
- **Adjustable induction (Energy Control)**
- **Adjustable air diffusion (Flow Pattern Control)**
- **Cooling and/or Heating (2 pipe coil)**
- **Flexible Construction Design**

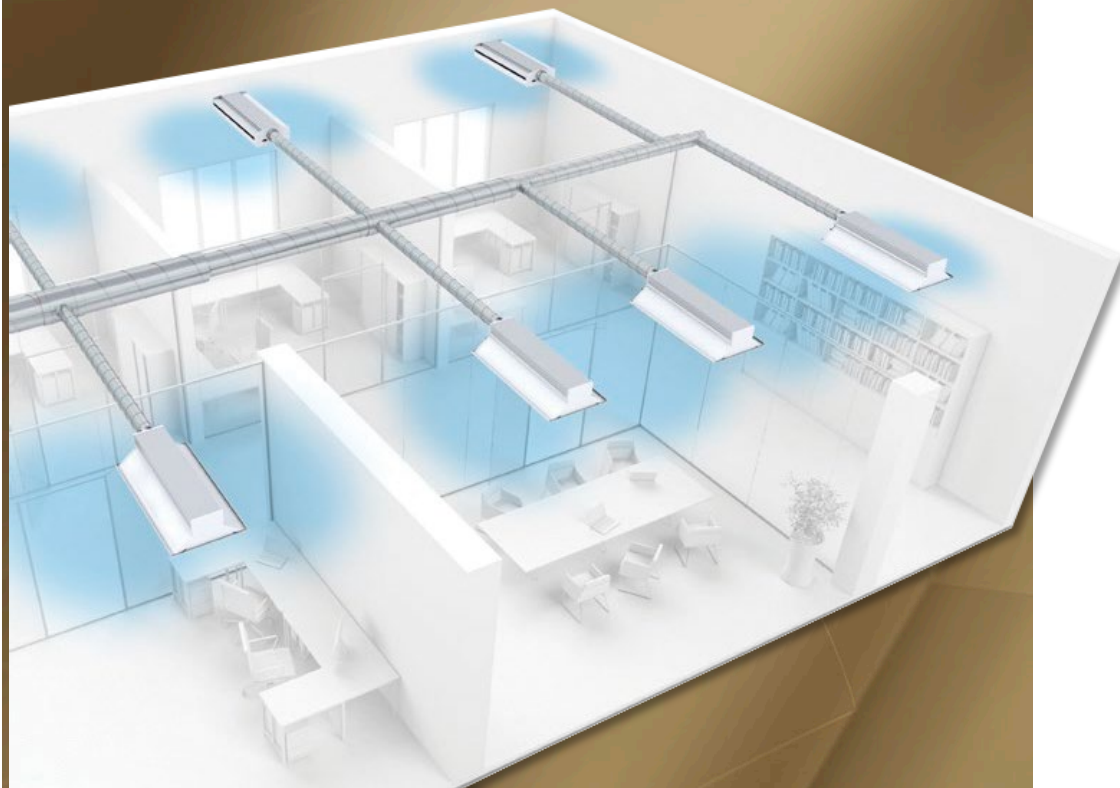


- **Ceiling flush - active**
- **Ideal for 1' wide ceiling grid applications**
- **High flexibility**
- **Easy installation**
- **Capacity volume easily adjustable**
- **Bottom plate can be pushed aside to enable adjustments of capacity as well as check-up and cleaning**
- **Cooling and/or heating (2 or 4 pipes coil)**
- **Flexible construction design**
- **Made in the U.S.A**



- **Designed for use in hotel bedrooms, individual hospital and offices.**
- **Ensures high quality indoor air with a very low noise level**
- **Provides high cooling capacity through optimal utilization of its cooling coil already while the air pressure and airflows are low**
- **Brings comfort thanks to low and silent diffusion:**
 - **Low noise level**
 - **Flexibility**
 - **Comfortable indoor air climate**





Chilled Beams Summary

1. IAQ is paramount as is occupant comfort. Comfortable people are more productive and are healthier.
2. Chilled beams low pressure drop saves energy by reducing fan power. Fan energy also saved when chilled beams are used in lieu of fan coil units.
3. Chilled beams reduce the required capacity on the central plant – reducing first costs.

Contact Information & Thank You

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Parts/Service Contact Information: service.semco2@flaktgroup.com

Warranty/Quality Claims: <https://info.semcohvac.com/claim-form>

Service Request: <https://info.semcohvac.com/service-request>

Parts Request: <https://info.semcohvac.com/parts-request>

Thank you for your attention!