

VERTICAL FAN COIL RETROFIT UNITS

BTR & DTR SERIES



The Comfort of Quality

engineered-comfort.com

Transform Your Retrofit Projects with Engineered Comfort

At Engineered Comfort, we specialize in providing top-of-the-line HVAC solutions that cater to the unique needs of our clients. Our BTR and DTR fan coil models stand out as premier choices for retrofit applications, offering superior performance, energy efficiency, and ease of installation.

BTR Fan Coil Model

The BTR Fan Coil is designed for blow-through retrofit applications, engineered for excellence, designed to seamlessly integrate into existing systems with minimal disruption. Ideal for retrofit projects, this model features:

- Compact Design: Perfect for tight spaces, ensuring a smooth fit into existing installations.
- High Efficiency: Optimized for low energy consumption, reducing operational costs while maintaining peak performance.
- Quiet Operation: Advanced sound-dampening technology for a comfortable and quiet environment.
- Ease of Maintenance: User-friendly design for quick access and hassle-free maintenance.





DTR Fan Coil Model

The DTR Fan Coil is the ideal solution for retrofit applications with draw-through designs. Renowned for its versatility and reliability, the DTR offers robust construction and innovative features, making it suitable for a wide range of retrofit projects. This model includes:

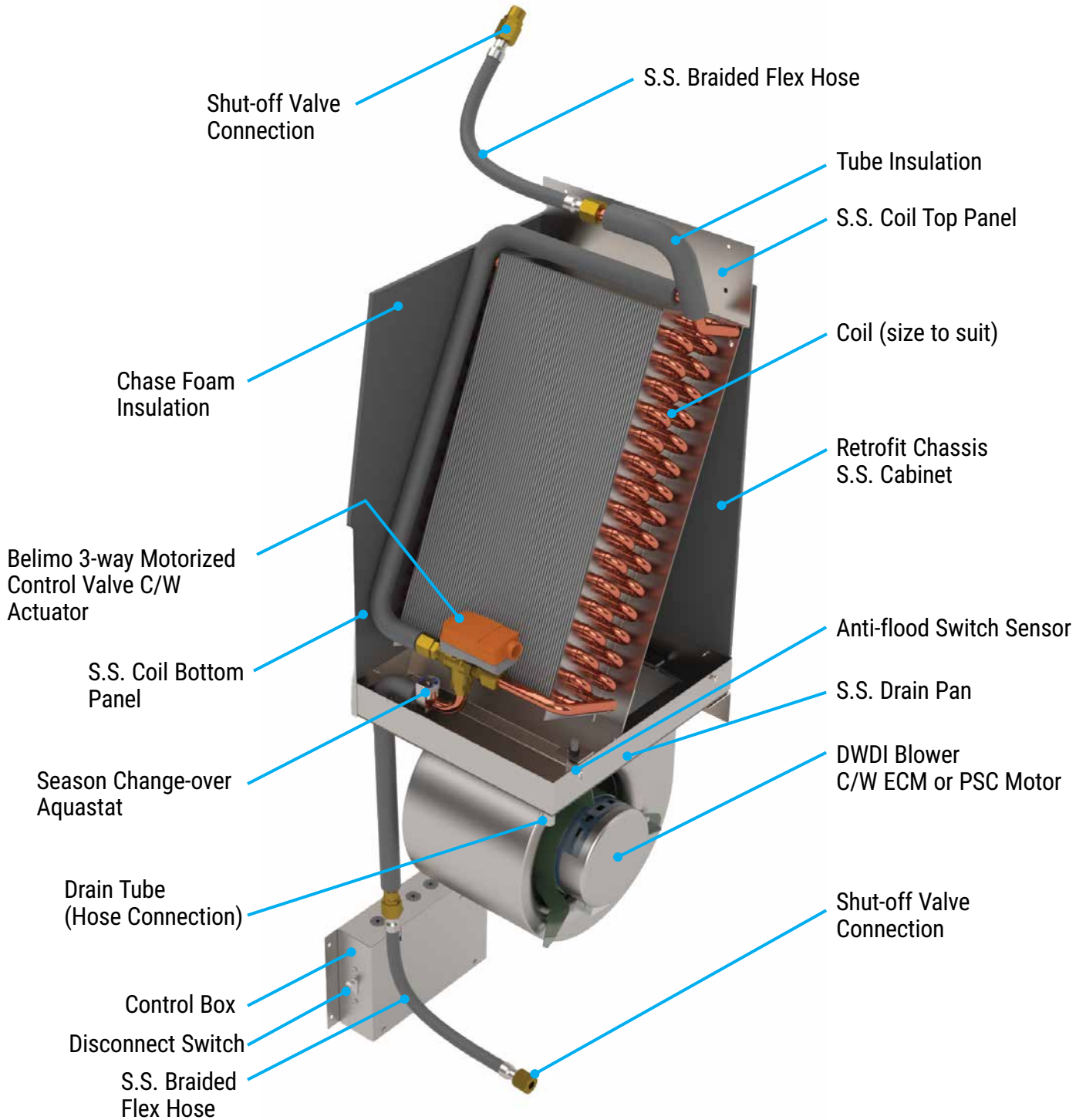
- Flexible Configurations: Available in multiple sizes and configurations to meet the diverse needs of any project.
- Advanced Control Systems: State-of-the-art control options for precise temperature regulation and enhanced user comfort.
- Durability: Built with high-quality materials to ensure long-lasting performance and reliability.
- Energy Savings: Engineered to deliver substantial energy savings, contributing to a greener and more sustainable operation.



Retrofit with Confidence

Engineered Comfort's BTR and DTR fan coil models are designed with retrofit projects in mind, making them the perfect choice for upgrading existing HVAC systems. Trust in our expertise and commitment to quality as you enhance your building's comfort and efficiency. Choose Engineered Comfort for solutions that truly stand the test of time.

Vertical Fan Coil Retrofit Units
BTR Series



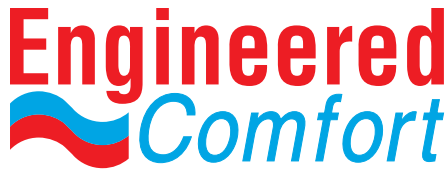
Note: Drawing does not show insulation. The entire internal stainless-steel cabinet is insulated with foam insulation. All insulation carries a flame spread rating of no more than 25 and smoke developed rating of no more than 50.



BTR SERIES SEQUENCES OF OPERATION

Remote Mounted Electronic 3-speed Programmable Thermostat, come with ECM Endura Pro Motor and Motorized Valve

1. System switch in “OFF” position; **entire system is off.**
2. Switch on the system. The motorized valve will close. When the fan is set in the “ON” position the fan can be manually adjusted to **High, Medium and Low.**
3. With the fan set in the “AUTO” position with a call for either heat or cooling, the fan and motorized valve will be energized together. The fan will automatically adjust the fan speed depending on the temperature variance between desired room temperature and current room temperature.
 - Between 1 - 3° fan will run on low speed
 - Between 4 - 6° fan will run on medium speed
 - 7° + fan will run on high speed
4. On a call for heating in the winter, with hot water supply, the motorized valve will open, and the fan will begin to blow. When the room temperature is satisfied the fan will stop and the motorized valve will close.
5. On a call for cooling in the summer, with cool water supply, the motorized valve will open, and the fan will begin to blow. When the room temperature is satisfied the fan will stop and the motorized valve will close.
6. Anti-Flood Protection: If the drain pan overflow safety switch detects an accumulation of water in the drain pan the thermostat will be de-energized seizing all fan coil operations to eliminate condensation buildup.



Vertical Fan Coil Retrofit Units

BTR Series

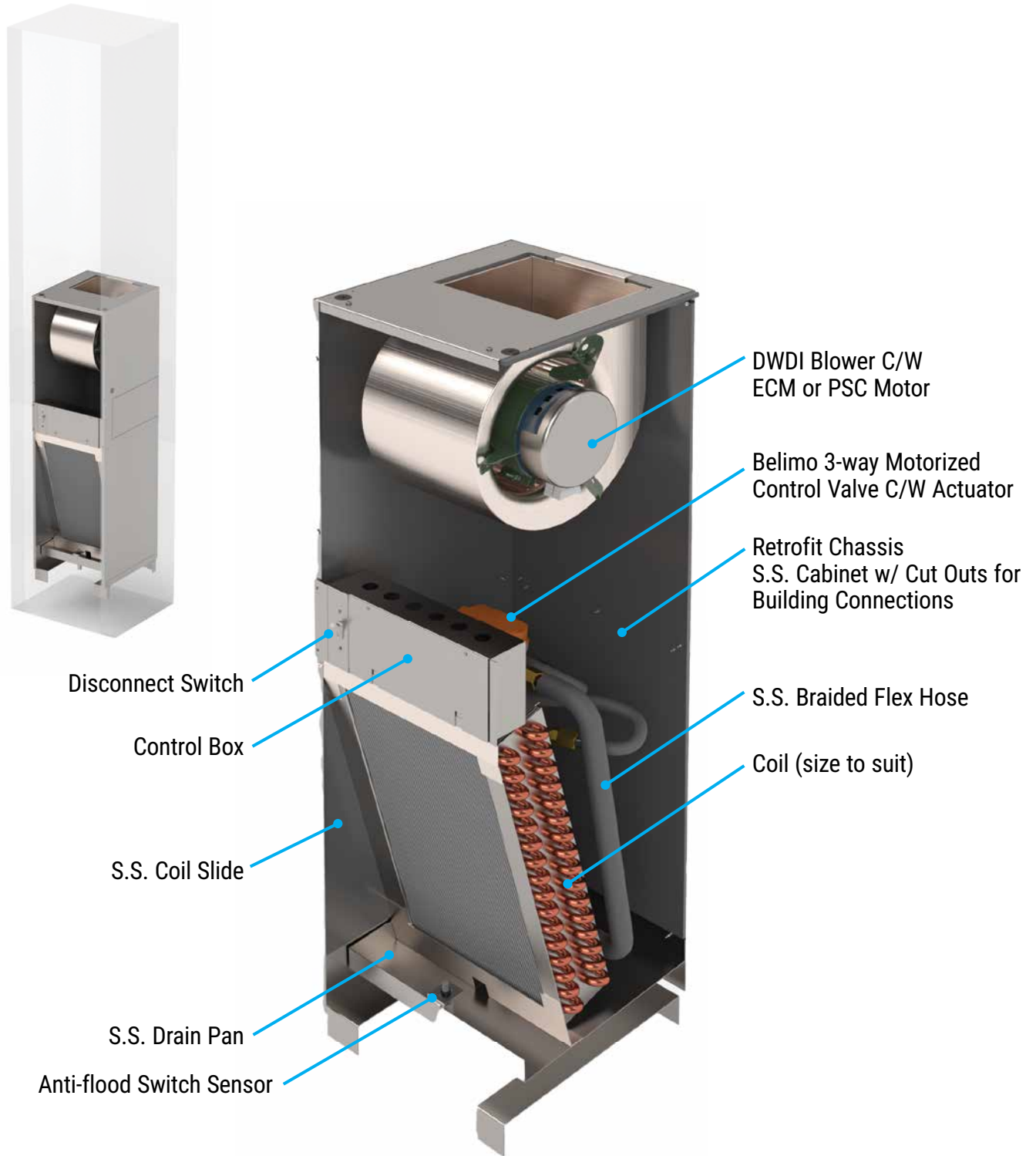
REPLACEMENT CAPACITY • BTR SERIES • LOW PROFILE VERTICAL FAN COIL UNITS

RETROFIT MODEL	Motor HP	# of Rows x Circuits	Supply Air Quality (CFM)	E.S.P. (IN WC)	COOLING				HEATING		
					Pressure Drop (ft.)	Water Flow (GPM)	Sensible Capacity (MBH)	Total Cooling Capacity (MBH)	Pressure Drop (ft.)	Water Flow (GPM)	Total Heating Capacity (MBH)
BTR350Z	1/4	3 x 1	350	0.2	0.9	1.5	7.2	9.6	0.7	1.5	25.6
BTR450Z	1/4	4 x 2	450	0.2	1.5	2	9.0	12.1	1.1	2.0	31.9
BTR600Z / BTR600ZW	1/4	4 x 2	600	0.2	3.1	2.5	12.4	17.1	2.4	2.5	42.8
BTR800Z / BTR800ZW	1/3	4 x 2	800	0.2	4.9	3	16.0	21.5	3.8	3.0	54.6
BTR1000Z	1/2	4 x 2	1000	0.2	9.4	5	20.9	29.2	7.2	5.0	70.8

MODE	EWT/LWT °F (°C)	EAT/LAT (DB) °F (°C)	EAT (WB) °F (°C)
COOLING	45 (7)/55 (13)	78 (26)	67 (19)
HEATING	160 (71)/130 (54)	70 (21)	—

ELECTRICAL RATINGS • BTR SERIES • LOW PROFILE VERTICAL FAN COIL UNITS COME WITH ECM ENDURA PRO OR PIKA MOTORS

RETROFIT MODEL	POWER SUPPLY			MAIN FAN (ECM)			BTR SERIES		
	V	Ph	Hz	PIKA	Motor Power (HP)	Motor FLA (A)	Unit FLA (A)	Unit MCA (A)	Unit MOP (A)
BTR350Z	115	1	60	PIKA	1/4	4.9	4.9	6.1	15
BTR450Z	115	1	60	PIKA	1/4	4.9	4.9	6.1	15
BTR600Z / BTR600ZW	115	1	60	PIKA	1/4	4.9	4.9	6.1	15
BTR800Z / BTR800ZW	115	1	60	Endura Pro	1/3	4.9	4.9	6.1	15
BTR1000Z	115	1	60	Endura Pro	1/2	6.9	6.9	8.6	15



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DTR SERIES SEQUENCES OF OPERATION

Remote Mounted Electronic 3-speed Programmable Thermostat, come with ECM Motor and Motorized Valve

1. System switch in "OFF" position; **entire system is off.**
2. Switch on the system. The motorized valve will close. When the fan is set in the "ON" position the fan can be manually adjusted to **High, Medium and Low.**
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DTR350Z	1/4	3 x 1	350	0.2	4.3	1.5	7.1	9.9	3.3	1.5	24.1
DTR450Z	1/4	4 x 2	450	0.2	2.3	2.5	9.8	14.0	1.7	2.5	34.0
DTR600Z / DTR600ZW	1/4	4 x 2	600	0.2	Max. 10	2.5	13.1	18.7	Max. 10	3.0	44.6
DTR800Z / DTR800ZW	1/3	4 x 2	800	0.2	Max. 10	3.5	17.5	25.1	Max. 10	3.5	59.2
DTR1000Z	1/2	4 x 2	1000	0.2	11.7	5.0	23.1	34.4	11.7	5.0	77.5

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About Engineered Comfort

Engineered Comfort is known for our industry leading customer focused approach to providing innovative commercial and industrial HVAC products. Engineered Comfort is a branch of Nailor Industries, a manufacturer of a unique and comprehensive line of products essential for a well designed HVAC system. Product offerings include Air Control and

Distribution products, VAV Terminal Units, Green Building products, Fan Coil Units, Electric Duct Heaters, Sound Attenuators, Air Handling Units and Filter Housings. Coupled with a wide range of product offerings and industry leading design, testing and manufacturing capabilities, Nailor Industries offers a single source solution for all of your HVAC needs.



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