

## Building Systems Useful Life

HVAC Systems	Average Useful Life Years
<b>1. Air Conditioners</b>	
a. Window Unit	10
b. Residential Single or Split Package	15
c. Commercial	10
d. Water-Cooled Package	20
e. Computer Room Unit	15
<b>2. Air Handling Units</b>	
a. Built-Up Heavy Duty	30
b. Packaged Medium-Duty	25
c. Severe Duty or 100% Outside Air	20
<b>3. Heat Pumps</b>	
a. Residential Air-to-Air	12
b. Commercial Air-to-Air	15
c. Commercial Water-to-Air	18
<b>4. Roof-Top Conditioners</b>	
a. Single Zone	18
b. Multizone	18
c. VAV	20
<b>5. Boilers, Hot Water</b>	
a. Steel Water-Tube	30
b. Steel Fire-Tube	30
c. Cast Iron	30
d. Electric	25
e. Condensing	15
<b>6. Boilers, Steam</b>	
a. Steel Water-Tube	28
b. Steel Fire-Tube	25
c. Cast Iron	30
<b>7. Burners</b>	18
<b>8. Furnaces</b>	
a. Gas Fired	18
b. Oil Fired	18
c. Condensing	15
<b>9. Unit Heaters</b>	
a. Gas	13
b. Electric	15
c. Hot Water	20
d. Steam	20

<b>10. Heaters</b>	
a. Electric Radiant or Convactor	10
b. Radiant Hot Water	25
c. Radiant Gas	18
d. Steam or Hot Water Convactor, Cast Iron	50
e. Steam or Hot Water Fin Tube	15
<b>11. Air Terminals</b>	
a. Diffusers, Grilles, Registers, Heavy Gauge, Coated	30
b. Diffusers, Grilles, Registers, Perforated or Light Gauge	15
c. Induction Units	35
d. Fan-Coil Units	20
e. VAV Boxes Cooling Only	25
f. CAV Boxes	25
g. Double Duct Boxes	25
h. Fan Powered VAV Boxes	17
i. Variable Volume Temperature Boxes	15
<b>12. Air Washers &amp; Humidifiers</b>	
a. Spray	12
b. Steam	15
c. Pan, Wheel or Wetted Element	8
<b>13. Ductwork</b>	
a. Galvanized Steel, Aluminum and Black Iron	30
b. Fiberglass	15
c. Flexible Round	10
<b>14. Dampers</b>	
a. Operable or Automatic	20
b. Fixed (balancing) or Fusible Link (fire)	30
<b>15. Fans</b>	
a. Centrifugal	25
b. Axial	20
c. Propeller	15
d. Ventilating Roof-Mounted, Mild Exhaust	20
e. Kitchen or Other Soiled Exhaust	15
<b>16. Coils - Fluid to Air</b>	
a. Direct Expansion (refrigerant)	18
b. Water/Steam Heating	20
c. Cooling and Dehumidifying	12
d. Electric	12
<b>17. Heat Exchangers</b>	
a. Commercial - Shell and Tube	
i. Steam to Domestic Water	13
ii. Steam to Heating Water	20
iii. Water to Domestic Water	15

iv. Water to Water	25
b. Residential Immersion Coil	25
c. Plate and Frame	25
d. Energy Recovery Wheel	15
e. Energy Recovery Water	12
f. Energy Recovery Air to Air	12
g. Energy Recovery Heat Pipe	20
<b>18. Reciprocating Air Compressors</b>	<b>15</b>
<b>19. Package Chillers</b>	
a. Reciprocating	20
b. Centrifugal	20
c. Absorption	30
d. Screw	20
e. Scroll	15
<b>20. Cooling Towers</b>	
a. Galvanized or Coated Steel	18
b. Wood	20
c. Ceramic	35
d. Fiberglass	35
e. Stainless Steel	25
f. Fill Media	15
<b>21. Condensers</b>	
a. Air-Cooled	20
b. Evaporative	15
<b>22. Insulation (not subject to condensation or leaks)</b>	
a. Molded	20
b. Blanket	25
<b>23. Pumps</b>	
a. Base Mounted	25
b. In-line	15
c. Sump-Submerged	10
d. Well-Submerged	10
e. Condensate	15
<b>24. Reciprocating Engines</b>	
a. Continuous Service	5
b. Back-Up Service	20
<b>25. Steam Turbines</b>	<b>30</b>
<b>26. Electric Motors</b>	
a. Without Soft Start	18
b. With Soft Start	25
<b>27. Motor Starters</b>	
a. In Dry Noncorrosive Areas	25

b. In Wet or Corrosive Areas (cooling towers)	10
<b>28. Electric Transformers</b>	
a. Oil-Filled	30
b. Dry Type	30
<b>29. Controllers</b>	
a. Pneumatic	18
b. Electric	20
c. Electronic	20
d. Computer Front End Controls	15
<b>30. Valve and Damper Actuators</b>	
a. Hydraulic	15
b. Pneumatic	20
c. Motorized Electric	18
d. Self-Contained	10
<b>31. Control Sensors</b>	
a. Temperature	20
b. Humidity, CO2	5
c. Water Flow	5
d. Air Flow	10
<b>32. Heating and Cooling Piping System</b>	
a. Above Ground	30
b. Ground Source Heat Exchange Loops	40
<b>33. Oil Storage Tank with Corrosion Protection</b>	
a. Above Ground	25
b. Underground	20
c. Underground: FRP Coated Steel	30
<b>34. Boiler Chimneys and Flues</b>	
a. Metal Flue and Breeching	20
b. Steel Chimney	30
c. Masonry Chimney	50

## Building Systems Useful Life

<b>Elevator/Escalator Systems</b>	<b>Average Useful Life Years</b>
<b>1. Elevator</b>	
a. Hydraulic	
i. Underground Cylinder Dry Location	15
ii. Car and Pump Unit	35
b. Traction	50
c. Geared Traction	35
d. Cab Interior Finish	10
e. Carpet	0.5
<b>2. Escalator</b>	
a. In Dry Location Not For Mass Transit	40
b. In Wet Location or For Mass Transit	20
<b>3. Controllers</b>	
a. Electromechanical Relay Based	30
b. Computer Based	20
<b>4. Elevator Door Operators</b>	
a. Passenger	20
b. Freight or Service Used For Carts	10
<b>5. Wheelchair and Stairway Chair Lift</b>	25

## Building Systems Useful Life

### Average Useful Life Years

#### Plumbing

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#### 1. Water Heaters with Longer Warranties

a. Electric, Normal Use	15
b. Electric, Heavy Use or Tankless	10
c. Oil Fired	18
d. Gas Fired, Normal Use	15
e. Gas Fired, Heavy Use or Tankless	10
f. Solar Thermal Collectors	20

#### 2. Flush Valves

12

#### 3. Fixtures: Commercial

a. Faucets	7
b. Water Closets	30
c. Urinals	30
d. Sinks	30
e. Refrigerated Drinking Fountain	15

#### 4. Pumps

a. Base Mounted	25
b. In-line	15
c. Sewage Ejector	10
d. Sump-Submerged or Pedestal	10
e. Well-Submerged	10

#### 5. Backflow Prevention

a. Light Duty	10
b. Heavy Duty (Main Service)	30

#### 6. Domestic Water Piping Systems

a. Hot and Cold Water (Copper or Plastic)	30
b. Waste Piping (PVC or Cast Iron)	30
c. Kitchen Waste	20

#### 7. Gas Piping Systems

a. Fuel Gas Threaded	30
b. Fuel Gas Welded	40
c. Medical Gas	40
d. Compressed Air	20

#### 8. Water Softeners

25



## Building Systems Useful Life

### Roofing and Siding

### Average Useful Life Years

#### 1. 4-Ply Built-Up

- a. Asphalt
  - i. Flat (Dead Level) 18
  - ii. Sloped (1/4 inch per foot) 25
- b. Cold-Tar 35
- c. Hot Applied Rubberized Asphalt (Protected Membrane Assembly) 30

#### 2. 2-Ply Modified Bitumen (Mopped Down)

- a. Flat (Dead Level) 15
- b. Sloped (1/4 inch per foot) 20

#### 3. Single Ply

- a. EPDM
  - i. Flat (Dead Level) 15
  - ii. Sloped (1/4 inch per foot) 20
- b. Thermoplastic (Hypalon, PVC) 20
- c. Modified Bitumen (Touched On)
  - i. Flat (Dead Level) 10
  - ii. Sloped (1/4 inch per foot) 15

#### 4. Metal

- a. Structural Roof Panels 25  
(Prefinished Galvanized Steel)
- b. Premanufactured Architectural Roof Panels 25  
(Prefinished Aluminum or Galvanized Steel)
- c. Custom Fabricated Standing Seam Roofing 75+  
(Copper, Lead Coated Copper, Terne Coated Stainless Steel)
- d. Custom Fabricated Flat Seam 50+  
(Copper, Lead Coated Copper, Terne Coated Stainless Steel)

#### 5. Asphalt Shingles

- a. 15 Year 15
- b. 20 Year 20
- c. 25 Year 25
- d. 30 Year 30

#### 6. Slate

- a. S-1 100
- b. S-2 75
- c. S-3 50



<b>7. Clay/Concrete Tile</b>	50+
<b>8. Spray-On Polyurethane Foam Roofing</b>	10
<b>9. Siding</b>	
a. Wood (Painted 7-10 years)	30
b. Metal	30
c. Vinyl	30
d. Masonry	75
e. Stone	100

## Building Systems Useful Life

<b>Electrical in Dry, Noncorrosive Locations*</b>	<b>Average Useful Life Years</b>
<b>1. Electric Motors</b>	18
<b>2. Electric Transformers</b>	
a. Oil-Filled	30
b. Dry Tape	30
<b>3. Motor Control Center</b>	30
<b>4. Automatic Transfer Switch</b>	25
<b>5. Uninterrupted Power Supply</b>	
a. Battery	10
b. Rotary	15
<b>6. Batteries</b>	5
<b>7. Power Panels</b>	
a. Light and Power Distribution Panel Boards	30
b. Switchgear and Service Entrance Equipment	40
<b>8. Circuit Breakers</b>	30
<b>9. Light Fixtures</b>	20
<b>10. Emergency Engine Generator Set</b>	20
<b>11. Ground Fault Circuit Interrupter (GFCI) Switch</b>	25
<b>12. Wire and Cable</b>	
a. 600 V and below	40
b. Above 600 V	30
<b>13. Solar Photovoltaic Collector Panels</b>	20
<b>14. Branch Circuit Wiring and Devices</b>	30
<b>15. Lightning Protection</b>	40

\*(Except For Equipment Designed to be Outdoors or in

Wet Locations)

## Building Systems Useful Life

<b>Fire/Life Safety/Security System</b>	<b>Average Useful Life Years</b>
<b>1 Fire Alarm Systems</b>	
a. Activation Devices (Pull Station, Smoke Detector, etc)	10
b. Notification Devices (AV Horn/Strobe)	15
c. Control Panels	15
d. Wiring	30
<b>2. Fire Pumps</b>	
a. Electric Motor Driven	25
b. Engine Driven	20
<b>3. Sprinkler Systems</b>	
a. Heads	25
b. Piping Systems	40
c. Equipment and Devices (Flow Switch, Dry Pipe Valve, etc)	20
<b>4. Security Systems</b>	
a. Activation Devices (Access Entry, Motion Sensor, etc)	10
b. Notification Devices (Horn, Dialer)	15
c. Control Panels	15
<b>5. Closed Circuit TV System</b>	
a. Monitors	53
b. Pan and Tilt Motors	53
c. Cameras	65
d. Computer Control	10
<b>6. Standby Power Supply: Battery</b>	5

## Building Systems Useful Life

Interior Finishes	Average Useful Life Years
<b>1. Flooring (Sealed When Porous, Except For Carpet)</b>	
a. Vinyl	
i. Tile	12
ii. Sheet	12
b. Carpet: Common Area	
i. Broad Loom	5
ii. Carpet Tiles	5
iii. Loop Pile	15
c. Epoxy Coating (two part)	10
d. Stone	
i. Granite	75+
ii. Marble	50
e. Terrazzo	50
f. Hardwood	
i. Finish	10
ii. Substrate	50
g. Concrete	50
<b>2. Walls</b>	
a. Vinyl Wall Covering	10
b. Painted	5
c. Wall Paper	4
d. Epoxy (two part)	15
e. Fabric	5
f. Wood Finishes	15
<b>3. Ceilings</b>	
a. Plaster/Drywall with Skim Coat	30
b. Suspended	
i. Spline System	20
ii. Lay-In System	25
iii. Ceiling Tiles	13
c. Metal	25
d. Wood	30
<b>4. Door Hardware</b>	
a. Entry Lock Sets	7
b. Closures	7
c. Automatic Doors	5

## Building Systems Useful Life

Structural	Average Useful Life Years
<b>1. Steel</b>	Life of Building
<b>2. Concrete</b>	Life of Building
<b>3. Wood</b>	Life of Building
<b>4. Façade</b>	
a. Brick, Block and Stone	Life of Building
b. Concrete: Poured in Place	Life of Building
c. Metal Curtain Wall	50
d. Glass Curtain Wall	50
e. Precast Panels	35
f. Stone Veneer	50
g. Windows (Operable or Gasketed)	30

## Building Systems Useful Life

### Parking Decks/Lots Surface

### Average Useful Life Years

#### 1. Underground

#### 2. Outside

- a. Exposed Paving at Grade or Topmost Level
- b. Covered Paving (Open at Sides)

Life of Building

30

40