

Comparison of Mechanical Sections: 2016 NYCECC vs. 2020 NYCECC

2016 NYCECC		2020 NYCECC	
2016 Title	2016 NYCECC Section	Comparable Section in 2020 NYCECC	2020 Title
1 General	C403.1	C403.1	Same as 2016
2 Provisions applicable to all mechanical systems (Mandatory)	C403.2	C403.2	System design (Mandatory)
3 Calculation of heating and cooling Loads	C403.2.1	C403.1.1	Calculation of heating and cooling loads (Mandatory)
4 Equipment sizing	C403.2.2	C403.3.1	Equipment sizing (Mandatory)
5		C403.3	Heating and cooling equipment efficiencies (Mandatory)
6 HVAC equipment performance requirements	C403.2.3	C403.3.2	HVAC equipment performance requirements (Mandatory)
7 Minimum Efficiency Requirements: Electrically Operated Unitary Air Conditioners and Condensing Units	Table C403.2.3(1)	Table C403.3.2(1)	Same as 2016
8 Minimum Efficiency Requirements: Electrically Operated Unitary and Applied Heat Pumps	Table C403.2.3(2)	Table C403.3.2(2)	Same as 2016
9 Minimum Efficiency Requirements: Electrically Operated Packaged Terminal Air Conditioners, Packaged Terminal Heat Pumps, Single-Package Vertical Air Conditioners, Single-Package Vertical Heat Pumps, Room Air Conditioners and Room Air-Conditioner Heat Pumps	Table C403.2.3(3)	Table C403.3.2(3)	Same as 2016
10 Warm-Air Furnaces and Combination Warm-Air Furnaces/Air-Conditioning Units, Warm-Air Duct Furnaces and Unit Heaters, Minimum Efficiency Requirements	Table C403.2.3(4)	Table C403.3.2(4)	Same as 2016
11 Minimum Efficiency Requirements: Gas- and Oil- Fired Boilers	Table C403.2.3(5)	Table C403.3.2(5)	Same as 2016
12 Minimum Efficiency Requirements: Condensing Units, Electrically Operated	Table C403.2.3(6)		
13 Water Chilling Packages - Efficiency Requirements	Table C403.2.3(7)	Table C403.3.2(6)	Same as 2016
14 Minimum Efficiency Requirements: Heat Rejection Equipment	Table C403.2.3(8)	Table C403.3.2(7)	Same as 2016
15 Minimum Efficiency Air Conditioners and Condensing Units Serving Computer Rooms	Table C403.2.3(9)	Table C403.3.2(8)	Same as 2016
16 Heat Transfer Equipment	Table C403.2.3(10)	Table C403.3.2(9)	Same as 2016
17 Minimum Efficiency Requirements: Electrically Operated Variable-Refrigerant-Flow Air Conditioners	Table C403.2.3(11)	Table C403.3.2(10)	Same as 2016
18 Minimum Efficiency Requirements: Electrically Operated Variable-Refrigerant-Flow Air-to-Air and Applied Heat Pumps	Table C403.2.3(12)	Table C403.3.2(11)	Same as 2016
19		Table C403.3.2(12)	Vapor Compression Based Indoor Pool dehumidifiers - Minimum Efficiency Requirements

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20		Table C403.3.2(13)	Electrically Operated DX-Doas Units, Single-Package and Remote Condenser, Without Energy Recovery - Minimum Efficiency Requirements
21		Table C403.3.2(14)	Electrically Operated DX-Doas Units, Single-Package and Remote Condenser, With Energy Recovery - Minimum Efficiency Requirements
22	Water-cooled centrifugal chilling packages	C403.3.2.1	Water-cooled centrifugal chilling packages (Mandatory)
23	Positive displacement (air- and water-cooled) chilling packages	C403.3.2.2	Positive displacement (air- and water-cooled) chilling packages (Mandatory)
24		C403.3.5	Buildings with high efficiency space heating gas boiler systems
25	HVAC system controls	C403.4	Heating and cooling system controls (Mandatory)
26	Thermostatic controls	C403.4.1	Thermostatic controls (Mandatory)
27	Heat pump supplementary heat	C403.4.1.1	Heat pump supplementary heat (Mandatory)
28	Deadband	C403.4.1.2	Deadband (Mandatory)
29	Set point overlap restriction	C403.4.1.3	Set point overlap restriction (Mandatory)
30		C403.4.1.4	Heated or cooled vestibules (Mandatory)
31	Off-hour controls	C403.4.2	Off-hour controls (Mandatory)
32	Thermostatic setback capabilities	C403.4.2.1	Thermostatic setback (Mandatory)
33	Automatic setback and shutdown capabilities	C403.4.2.2	Automatic setback and shutdown (Mandatory)
34	Automatic start capabilities	C403.4.2.3	Automatic start (Mandatory)
35	Shutoff dampers	C403.7.7	Shutoff dampers (Mandatory)
36	Zone isolation	C403.2.1	Zone isolation required (Mandatory)
37	Snow- and ice-melt system controls	C403.12.2	Same as 2016
38	Freeze protection system controls	C403.12.3	Same as 2016
39	Economizer fault detection and diagnostics (FDD)	C403.5.5	Economizer fault detection and diagnostics (Mandatory)
40	Hot water boiler outdoor temperature setback control	C403.4.1.5	Hot water boiler outdoor temperature setback control (Mandatory)
41	Ventilation	C403.2.2	Ventilation (Mandatory)
42		C403.7	Ventilation and exhaust systems (Mandatory)
43	Demand controlled ventilation	C403.7.1	Demand control ventilation (Mandatory)
44	Enclosed parking garage ventilation controls	C403.7.2	Enclosed parking garage ventilation controls (Mandatory)
45		C403.7.3	Ventilation air heating control (Mandatory)
46	Energy recovery ventilation systems	C403.7.4	Energy recovery ventilation systems (Mandatory)

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47 Energy Recovery Requirement (Ventilation systems operating less than 8,000 hours per year)	Table C403.2.7(1)	Table C403.7.4(1)	Same as 2016
48 Energy Recovery Requirement (Ventilation systems operating not less than 8,000 hours per year)	Table C403.2.7(2)	Table C403.7.4(2)	Same as 2016
49 Kitchen exhaust systems	C403.2.8	C403.7.5	Kitchen exhaust systems (Mandatory)
50 Maximum net exhaust flow rate, cfm per linear foot of hood length	Table C403.2.8	Table C403.7.5	Same as 2016
51 Duct and plenum insulation and sealing	C403.2.9	C403.11.1	Duct and plenum insulation and sealing (Mandatory)
52 Duct construction	C403.2.9.1	C403.11.2	Duct construction (Mandatory)
53 Low-pressure duct systems	C403.2.9.1.1	C403.11.2.1	Low-pressure duct systems (Mandatory)
54 Medium-pressure duct systems	C403.2.9.1.2	C403.11.2.2	Medium-pressure duct systems (Mandatory)
55 High-pressure duct systems	C403.2.9.1.3	C403.11.2.3	High-pressure duct systems (Mandatory)
56 Piping insulation	C403.2.10	C403.11.3	Piping insulation (Mandatory)
57 Minimum Pipe insulation thickness (in inches)	Table C403.2.10	Table C403.11.3	Same as 2016
58 Protection of piping insulation	C403.2.10.1	C403.11.3.1	Protection of piping insulation (Mandatory)
59 Mechanical systems commissioning and completion requirements.	C403.2.11	C408.2	Mechanical, renewable energy, and service water heating systems commissioning and completion requirements
60 Air system design and control	C403.2.12	C403.8	Fans and fan controls
61 Allowable fan motor horsepower	C403.2.12.1	C403.8.1	Allowable fan horsepower (Mandatory)
62 Fan Power Limitation	Table C403.2.12.1(1)	Table C403.8.1(1)	Same as 2016
63 Fan Power Limitation Pressure Drop Adjustment	Table C403.2.12.1(2)	Table C403.8.1(2)	Same as 2016
64 Motor nameplate horsepower	C403.2.12.2	C403.8.2	Motor nameplate horsepower (Mandatory)
65 Fan efficiency	C403.2.12.3	C403.8.3	Fan efficiency (Mandatory)
66 Heating outside a building	C403.2.13	C403.12.1	Same as 2016
67 Refrigeration equipment performance	C403.2.14	C403.10	Same as 2016
68 Minimum efficiency requirements: commercial refrigeration	Table C403.2.14(1)	Table C403.10.1(1)	Commercial refrigerators and freezers - minimum efficiency requirements
69 Minimum efficiency requirements: commercial refrigerators and freezers	Table C403.2.14(2)	Table C403.10.1(2)	Commercial refrigeration - minimum efficiency requirements
70 Walk-in coolers, walk-in freezers, refrigerated warehouse coolers and refrigerated warehouse freezers	C403.2.15	C403.10.1	Walk-in coolers, walk-in freezers, refrigerated warehouse coolers and refrigerated warehouse freezers (Mandatory)
71 Walk-in coolers and walk-in freezers	C403.2.16	C403.10.2	Walk-in coolers and walk-in freezers (Mandatory)
72 Refrigerated display cases	C403.2.17	C403.10.3	Refrigerated display cases (Mandatory)
73 Automatic control of HVAC in hotel/motel guest rooms	C403.2.18	C403.7.6	Automatic control of HVAC systems serving guestrooms (Mandatory)

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74 Guest room HVAC setpoint control	C403.2.18.1	C403.7.6.1	Temperature setpoint controls
75 Automatic control	C403.2.18.2	C403.7.6.2	Ventilation controls
76 Economizers (Prescriptive)	C403.3	C403.5	Same as 2016
77 Minimum Chilled-water system cooling capacity for determining economizer cooling requirements	Table C403.3(1)	Table C403.5(1)	Same as 2016
78 Equipment efficiency performance exception for economizers	Table C403.3(2)	Table C403.5(2)	Same as 2016
79 Integrated economizer control	C403.3.1	C403.5.1	Same as 2016
80 DX Cooling Stage Requirements for Modulating Airflow Units	Table C403.3.1	Table C403.5.1	Same as 2016
81 Economizer heating system impact	C403.3.2	C403.5.2	Same as 2016
82 Air economizers	C403.3.3	C403.5.3	Same as 2016
83 Design capacity	C403.3.3.1	C403.5.3.1	Same as 2016
84 Control signal	C403.3.3.2	C403.5.3.2	Same as 2016
85 High-limit shutoff	C403.3.3.3	C403.5.3.3	Same as 2016
86 High-Limit Shutoff Control Setting for Air Economizers	Table C403.3.3.3	Table C403.5.3.3	Same as 2016
87 Relief of excess outdoor air	C403.3.3.4	C403.5.3.4	Same as 2016
88 Economizer dampers	C403.3.3.5	C403.5.3.5	Same as 2016
89 Water-side economizers	C403.3.4	C403.5.4	Same as 2016
90 Design capacity	C403.3.4.1	C403.5.4.1	Same as 2016
91 Maximum pressure drop	C403.3.4.2	C403.5.4.2	Same as 2016
92 Hydronic and multiple-zone HVAC systems controls and equipment (Prescriptive)	C403.4	C403.6	Requirements for mechanical systems serving multiple zones
93 Fan control	C403.4.1	C403.8.5	Same as 2016
94 Fan airflow control	C403.4.1.1	C403.8.5.1	Same as 2016
95 Effective Dates for Fan Control	Table C403.4.1.1	Table C403.8.5.1	Cooling Systems
96 Static pressure sensor location	C403.4.1.2	C403.6.9	Same as 2016
97 Set points for direct digital control	C403.4.1.3	C403.6.8	Setpoints for direct digital control
98 Hydronic systems controls	C403.4.2	C403.4.3	Same as 2016
99 Three-pipe System	C403.4.2.1	C403.4.3.1	Same as 2016
100 Two-pipe changeover system	C403.4.2.2	C403.4.3.2	Same as 2016
101 Hydronic (water loop) heat pump systems	C403.4.2.3	C403.4.3.3	Same as 2016

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102	Temperature dead band	C403.4.2.3.1	C403.4.3.3.1	Temperature deadband
103	Heat rejection	C403.4.2.3.2	C403.4.3.3.2	Same as 2016
104	Climate Zones 3 and 4	C403.4.2.3.2.1		
105	Climate Zones 5 through 8	C403.4.2.3.2.2		
106	Two-position valve	C403.4.2.3.3	C403.4.3.3.3	Same as 2016
107	Part-load controls	C403.4.2.4	C403.4.4	Same as 2016
108			Table C403.4.4	Variable Speed Drive (VSD) Requirements for Demand-Controlled Pumps
109	Boiler turndown	C403.4.2.5	C403.3.4	Same as 2016
110	Boiler Turndown	Table C403.4.2.5	Table C403.3.4	Same as 2016
111	Pump isolation	C403.4.2.6	C403.4.5	Same as 2016
112	Heat Rejection Equipment	C403.4.3	C403.9	Same as 2016
113	General	C403.4.3.1		
114	Fan speed control	C403.4.3.2	C403.9.1	Same as 2016
115	Fan motors not Less than 7.5 hp	C403.4.3.2.1		
116	Multiple-cell heat rejection equipment	C403.4.3.2.2	C403.9.2	Same as 2016
117	Limitation on centrifugal fan open-circuit cooling towers	C403.4.3.3	C403.9.3	Same as 2016
118	Tower flow turndown	C403.4.3.4	C403.9.4	Same as 2016
119	Requirements for complex mechanical systems serving multiple zones	C403.4.4	C403.6	Requirements for mechanical systems serving multiple zones
120			C403.6.1	Variable air volume and multiple-zone systems
121	Single-duct VAV systems, terminal devices	C403.4.4.1	C403.6.2	Same as 2016
122	Dual-duct and mixing VAV systems, terminal devices	C403.4.4.2	C403.6.3	Same as 2016
123	Single-fan dual-duct and mixing VAV systems, economizers	C403.4.4.3	C403.6.4	Same as 2016
124	Fractional hp fan motors	C403.4.4.4	C403.8.4	Fractional hp fan motors (Mandatory)
125	Supply-air temperature reset controls	C403.4.4.5	C403.6.5	Same as 2016
126	Multiple-zone VAV system ventilation optimization control	C403.4.4.6	C403.6.6	Same as 2016
127			C403.6.7	Parallel-flow fan-powered VAV air terminal control
128	Heat recovery for service water heating	C403.4.5	C403.9.5	Same as 2016
129	Hot gas bypass limitation	C403.4.6	C403.3.3	Same as 2016
130	Maximum Hot Gas Bypass Capacity	Table C403.4.6	Table C403.3.3	Same as 2016

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131 Refrigeration systems	C403.5	C403.10.4	Same as 2016
132 Condensers serving refrigeration systems	C403.5.1	C403.10.4.1	Same as 2016
133 Compressor systems	C403.5.2	C403.10.4.2	Same as 2016
134		C403.10.2.1	Performance Standards (Mandatory)
135		Table C403.10.2.1(1)	Walk-in Cooler and Freezer Display Door Efficiency Requirements
136		Table C403.10.2.1(2)	Walk-in Cooler and Nondisplay Door Efficiency Requirements
137		Table C403.10.2.1(3)	Walk-in Cooler and Freezer Refrigeration System Efficiency Requirements
138		C403.11	Construction of HVAC system elements
139		C403.12	Mechanical systems located outside of the building thermal envelope (Mandatory)