



**Building Standards
114 West 47th Street**

Air Conditioning

The air conditioning system is a variable air volume system, which is designed to:

- a) Maintain indoor drybulb temperature of 68°F, plus or minus 3°F, when the outdoor temperature is between 15°F and 60°F, during the heating season.
- b) Maintain indoor drybulb temperature of 75°F, plus or minus 3°F, and approximately 50% relative humidity when outside conditions are not more than 89°F drybulb and 73°F wet bulb, during the cooling season.

The above noted performance standards are based upon the following conditions of internal heat and moisture gain:

- a) one person per 100 usable square feet.
- b) a maximum of 4.0 watts per usable square foot for lighting and power combined.
- c) the use of internal shading devices (blinds/shades).

VAV terminal units shall be pressure independent single duct VAV Terminal Titus Model DESV. The terminals shall be equipped with pressure independent direct digital controls supplied by Tenant's control (BMS) contractor and mounted by the terminal unit manufacturer.

Controls shall be compatible with Multi Point Center Averaging inlet velocity sensors (Aero cross) supplied by the terminal manufacturer. The sensor shall be multi-point center averaging type, with a minimum of four measuring ports parallel to the take-off point from the sensor. Sensors with measuring ports in series are not acceptable. The sensor must provide a minimum differential pressure signal of 0.03" w.g. at an inlet velocity of 500 fpm.

Controls shall be Siemens Building Technologies Terminal Equipment Controller. Floor Level Network (FLN) shall be wired by Tenant's control contractor to an FLN Controller (FLNC) or Modular Building Controller (MBC) spaced no further than one per every three floors.

The Base Building fans will be operated as VAV systems, with a base discharge temperature of 52°F, reset to a maximum of 65°F based on the number of Terminal Units calling for their minimum or maximum flow. External Static Pressure available to the tenant at base building point of connection for supply air shall be a minimum of 1.0".

Tenant shall be responsible for integrating all VAV terminal units into the duct static pressure reset and the curtailment sequences of operation, via the Tenant's control contractor.

- a) Duct static pressure reset program
 - a. A DDC static pressure software program shall monitor the number of VAV terminal units at maximum position and the number of VAV terminal units at minimum position and reset the supply fan static pressure set point downward



and upward to reduce supply fan static pressure set point to its lowest possible setting. All set points and time delays to be adjustable.

- b. During system startup, the static pressure control algorithm, integral control mode shall be suppressed until the control point is within the proportional band of the controller to avoid reset windup.

b) Curtailment program

- a. The curtailment system operates based on an adjustable software schedule (curtailment time), manually by an operator at the workstation or if the building demand from an electrical meter input exceeds a user defined set point (adjustable).
- b. Graphics: User-definable inputs shall conform to the following colors on the curtailment system graphic:
- c. The status of each piece of equipment shall be illustrated on the curtailment system graphic.

Landlord shall not be required to meet the above standards if directed otherwise at any time by any governmental authority having jurisdiction.

Condenser Water

Condenser water for support of Tenant supplemental air conditioning equipment is available for heat rejection purposes only. Tenant supplemental air conditioning equipment shall be sized at flowrate of 2 GPM/ton. During cooling season, the building will supply condenser water at 85°F with a 15°F ΔT. During heating season, the building will supply condenser water at no lower than 85°F. Tenant is required to install pumping to supply condenser water to Tenant installed equipment. See below for pumping requirements. Refer to Tenant Alteration Guidelines for more information on installation requirements.

Supplemental Pumping Requirements

Floor	Elevation	Min Dynamic Head (ft)	Max Dynamic Head (ft)	Min Available Pressure (PSI)	Max Operating Pressure (PSI)
26	333' 0"	11.9	28.33	18.26	107.20
25	320' 3"	11.9	28.99	23.67	112.79
24	307' 6"	11.9	29.66	29.08	118.38
23	294' 9"	11.9	30.19	34.48	123.97
22	282' 0"	11.9	30.86	39.9	129.55
21	269' 3"	11.9	31.26	45.31	135.14
20	256' 6"	11.9	31.92	50.73	140.72
19	243' 9"	11.9	32.45	56.14	146.30
18	231' 0"	11.9	32.85	61.56	151.87
17	218' 3"	11.9	33.52	66.99	157.45



Floor	Elevation	Min Dynamic Head (ft)	Max Dynamic Head (ft)	Min Available Pressure (PSI)	Max Operating Pressure (PSI)
16	193' 0"	11.9	34.58	77.73	168.47
15	179' 0"	11.9	35.11	83.69	174.58
14	165' 3"	11.9	35.51	89.54	180.57
12	151' 3"	11.9	36.04	677.08	186.67
11	137' 3"	11.9	36.58	101.5	192.77
10	124' 6"	11.9	36.97	106.9	198.37
9	111' 9"	11.9	37.37	112.3	203.87
8	99' 0"	11.9	37.64	117.8	209.47
7	86' 3"	11.9	38.17	123.2	214.97
6	73' 6"	11.9	38.57	128.7	220.57
5	60' 3"	11.9	38.84	134.3	226.27
4	47' 6"	11.9	39.24	139.8	231.87
3	34' 9"	11.9	39.50	145.2	237.37
2	21' 0"	11.9	39.90	151.1	243.37
1	0' 0"	11.9	40.43	160.1	252.47
C1	-15' 0"	11.9	40.70	166.5	259.07
C2	-28' 0"	11.9	40.70	168	260.57

Window Treatments

MechoShade-Ecoveil - 5% Open - 1351 White.

Base Building systems and the mandated vendor:

Fire Alarm:	Cross-Fire & Security Co., Inc.	Brendan Doorly 718-234—8600 Cell: 646-734-8023 bdoorly@cfsnyc.com
Elevator:	Schindler Elevator	Timothy Whalen Sales Representative 212-708-1173 Cell: 973-207-0420 Timothy.whalen@us.schindler.com



BMS:	T. E. C. Systems	Mauricio Martinez Cell: 646-235-6435 mmartinez@tec-systems.com
Water treatment:	Nalco Chemical Co.	Josh Nanes 518-577-1402 jananes@ecolab.com
Security:	Kastle Systems	Lorraine Reichert Operations Manager 212-824-3823 lreichert@kastle.com
Air Balancing:	International Testing & Balancing Weickert Industries, Inc.	Bill Freese 516-781-8400 itbld@optonline.net Lisa M. Weickert 718-706-0707 Cell: 516-330-9502 lisa@weickert.com
Enhanced Cellular In-Building Distributed Antenna System [iDAS]:	Wireless Information Networks	John Wyskiel 630-325-6254 Cell: 708-323-8517 jwyskiel@indoorCellular.com