

HEATING, VENTILATING, & AIR CONDITIONING SYMBOL LIST

HVAC FLOW/RISER DIAGRAM LEGEND	
	AH AIR HANDLING UNIT
	SPACE GAINER AIR HANDLING UNIT (CUSTOM MADE AHU)
	CHILLERS
	COOLING COIL
	HEATING COIL
	COOLING TOWERS (INDUCED DRAFT)
	CENTRIFUGAL FAN
	FAN COIL UNIT
	PLATE & FRAME HEAT EXCHANGER
	PUMP
	RETURN/EXHAUST AIR DIRECTION
	SUPPLY AIR FLOW
	VAV BOX
	UNIT HEATER

DUCTWORK LEGEND	
	FUSIBLE LINK FIRE DAMPER W/DUCT ACCESS DOOR OR (SMOKE DAMPER) (COMBINATION FRESMOKE DAMPER)
	ELBOW WITH TURNING VANES
	BRANCH TAKEOFF
	RADIUS ELBOW
	VAV BOX VAV DESIGNATION (CFM)
	FAN POWERED BOX BOX DESIGNATION TOTAL CFM
	LINEAR DIFFUSER
	CEILING DIFFUSER (4-WAY)
	DOUBLE SIDED AIR LIGHT TROFFER
	SINGLE SIDED AIR LIGHT TROFFER
	RETURN REGISTER OR GRILLE
	FLEXIBLE DUCT
	OPENING IN WALL ABOVE HUNG CEILING (SIZE)
	SUPPLY REGISTER
	RETURN OR EXHAUST REGISTER OR GRILLE
	DOOR LOUVER (SIZE)
	UNDERCUT DOOR
	SQUARE FEET
	DIAMETER
	FIRE RATED ENCASED DUCT
	SUPPLY DUCT UP (DISCHARGE SIDE OF FAN)

DUCTWORK LEGEND (CONTINUED)	
	SUPPLY DUCT DOWN (DISCHARGE SIDE OF FAN)
	RETURN OR EXHAUST DUCT UP (SUCTION SIDE OF FAN)
	RETURN OR EXHAUST DUCT DOWN (SUCTION SIDE OF FAN)
	SLOPING RISE IN DUCTWORK
	SLOPING DROP IN DUCTWORK
	ACCESS DOOR IN DUCT
	DUCT SIZE (CLEAR INSIDE DIMENSION) FIRST FIGURE INDICATES PLAN SIZE
	ROUND DUCT DIAMETER SIZE (CLEAR INSIDE DIMENSION)
	ACOUSTIC LINING IN DUCT (DUCT SIZE NOTED INDICATES INSIDE DIMENSIONS)
	FLEXIBLE CONNECTION
	VOLUME DAMPER
	AUTOMATIC LOUVER DAMPER (MOTORIZED)

PIPING LEGEND	
	CONDENSER WATER SUPPLY
	CONDENSER WATER RETURN
	CHILLED WATER SUPPLY
	DOMESTIC COLD WATER MAKE-UP
	ARROW INDICATES DIRECTION OF FLOW
	PITCH PIPE DOWN IN DIRECTION OF ARROW
	DRAIN LINE
	PIPE ANCHOR
	PIPE GUIDE
	EXPANSION COMPENSATOR
	EXPANSION LOOP (SIZE W x H)
	CAPPED PIPE
	DIRT POCKET
	T-Y TYPE STRAINER
	BASKET TYPE STRAINER
	ELBOW TURNED UP
	ELBOW TURNED DOWN
	BOTTOM PIPE CONNECTION
	TOP PIPE CONNECTION

PIPING LEGEND (CONTINUED)	
	SLOPED CHANGE IN PIPE ELEVATION
	FLEXIBLE CONNECTION
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	AUTOMATIC THREE-WAY CONTROL VALVE
	AUTOMATIC TWO-WAY CONTROL VALVE
	RELIEF VALVE
	ANGLE RELIEF VALVE
	PRESSURE REDUCING VALVE (PRV)
	LUBRICATED PLUG VALVE
	LOCKSHIELD GLOBE VALVE
	SOLENOID VALVE
	BUTTERFLY VALVE (MANUAL)
	BUTTERFLY VALVE (MOTORIZED)
	BALL VALVE
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	THERMOMETER
	PIPE SENSOR WELL (THERMOMETER)
	PRESSURE GAUGE AND COCK
	FLOW BALANCING STATION
	SLEEVE
	WATER PROOF SLEEVE

ABBREVIATIONS	
ABV	ABOVE
AC	AIR CONDITIONING
ACS	AIR CONDITIONING SUPPLY
AD	ACCESS DOOR
AF	ABOVE FINISHED FLOOR
AH	AIR HANDLER
AL	ACOUSTICAL LINING
ALD	AUTOMATIC LOUVER DAMPER (MOTORIZED)
ATC	AUTOMATIC TEMPERATURE CONTROL
B D D	BACK DRAFT DAMPER
B G	BOTTOM GRILLE
BMS	BUILDING MANAGEMENT SYSTEM
BO	BLANK OFF
B.R.	BOTTOM REGISTER
BHP	BRAKE HORSE POWER
BTU	BRITISH THERMAL UNIT
CC	COOLING COIL
C.D.	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
C.G.	CEILING GRILLE
CH	CABINET HEATER
C.O.	CLEAN OUT
C.R.	CEILING REGISTER
CT	COOLING TOWER
DN	DOWN
E.A.T.	ENTERING AIR TEMPERATURE
E.C.H.	ELECTRIC CABINET HEATER
EF	EXHAUST FAN
EHC	ELECTRIC HEATING COIL
ELH	ELECTRIC UNIT HEATER
E.W.T.	ENTERING WATER TEMPERATURE
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FEPR	FUSIBLE LINK FIRE DAMPER W/DUCT ACCESS DOOR
FL	FLOOR
F.L.A.	FULL LOAD AMPS
FLR	FUSIBLE LINK REGISTER
FPB	FAN POWERED BOX
FSD-FL	COMBINATION FRESMOKE DAMPER WITH FUSIBLE LINK

ABBREVIATIONS	
FDPR	FIRE DAMPER
GPM	GALLONS PER MINUTE
GH	GENERAL EXHAUST
HC	HEATING COIL
HP	HORSE POWER
HSD	COMBINATION HEATSMOKE DAMPER
HX	HEAT EXCHANGER
I.D.	INSIDE DIMENSION
KW	KILOWATT
KWH	KILOWATT HOURS
KX	KITCHEN EXHAUST
L.A.T.	LEAVING AIR TEMPERATURE
LD	LINEAR DIFFUSER (CEILING, WALL, SILL OR FLOOR)
L.R.A.	LOCK ROTOR AMPS
LWS	LOUVER WITH WIRE SCREEN
L.W.T.	LEAVING WATER TEMPERATURE
M.A.T.	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MIN	MINIMUM
MO (NO)	MASONRY OPENING (WALL OPENING)
N.C.	NORMALLY CLOSED
N.F.A.	NET FREE AREA
N.I.C.	NOT IN THIS CONTRACT
N.O.	NORMALLY OPEN
N.T.S.	NOT TO SCALE
OA	OUTSIDE AIR
OSD	OPPOSED BLADE DAMPER
P	PUMP
PD	PUMPED DISCHARGE
PHE	PLATE HEAT EXCHANGER
PHX	PLATE HEAT EXCHANGER
PSI	POUNDS PER SQUARE INCH (GAUGE)
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
RA	RETURN AIR
RF	RETURN FAN
RHC	REHEAT COIL
RM	REFRIGERATION MACHINE
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SDPR	SMOKE DAMPER
SF	SUPPLY FAN
SP	STAIR PRESSURIZATION
ST	SOUND TRAP
SX	SMOKE EXHAUST
TF	TRANSFER FAN
T.G.	TOP GRILLE
T.R.	TOP REGISTER
TRD	TRANSFER DUCT
TRG	TRANSFER GRILLE
TX	TOILET EXHAUST
UH	UNIT HEATER
UHE	UNIT HEATER (ELECTRIC)
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
WMS	WIRE MESH SCREEN
(X00)	CUBIC FEET OF AIR PER MINUTE OR GALLONS PER MINUTE

CONTROLS LEGEND	
	TOTALIZING FLOW METER
	TOTALIZING B.T.U. METER
	THERMOSTAT
	SMOKE DETECTOR

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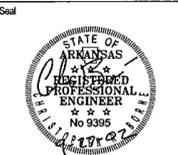
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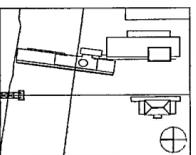
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