

AIR DISTRIBUTION SYMBOLS

	RECTANGULAR DUCT. (FIRST NUMBER IS SIDE SHOWN) DIMENSIONS IN INCHES
	FLAT OVAL DUCT. (FIRST NUMBER IS HORIZONTAL SIDE) DIMENSIONS IN INCHES
	12 INCH ROUND DUCT
	MOTORIZED DAMPER
	FLEXIBLE DUCT
	DUCT FLEXIBLE CONNECTOR (FC)
	DUCT DROPS AND RISES IN DIRECTION OF AIR FLOW
	RETURN DUCT TURNED UP OR DOWN (DASHED)
	SUPPLY DUCT TURNED UP OR DOWN (DASHED)
	EXHAUST DUCT TURNED UP OR DOWN (DASHED)
	ACOUSTICAL LINING (DUCT DIM. FOR NET FREE AREA)
	ROUND DUCT ELBOW DOWN
	ROUND DUCT ELBOW UP
	SQUARE TO ROUND TRANSITION
	CAP (DUCT AND/OR PIPE)
	INDICATES DUCT, PIPING, EQUIPMENT TO BE REMOVED.
	EXHAUST AIR
	RETURN AIR
	SUPPLY AIR
	VOLUME DAMPER
	FIRE DAMPER
	SMOKE DAMPER
	TAG NO.
	COMBINATION SMOKE/FIRE DAMPER
	TAG NO.
	RECTANGULAR ELBOW W/TURNING VANES
	DIRECTION OF AIR FLOW (IN)
	DIRECTION OF AIR FLOW (OUT)
	HUMIDISTAT OR HUMIDITY SENSOR
	THERMOSTAT ("T" STAT) OR TEMP. SENSOR
	CARBON DIOXIDE SENSOR
	SMOKE DETECTOR
	ACCESS DOOR
	DIFFUSER, REGISTER OR GRILLE TAG
	CFM AIR FLOW QUANTITY
	TYP. 3
	FINNED TUBE TAG
	LENGTH OF FINNED ELEMENT
	DETAIL NO.
	SHEET NO. WHERE DETAIL IS LOCATED
	EQUIPMENT TAG
	EQUIPMENT NO.

PIPING SYMBOLS

	UNION		ORIFICE FLOWMETER
	FLANGE		FLEXIBLE PIPE CONNECTOR
	PIPE ANCHOR		EXPANSION JOINT
	PIPE GUIDE OR SLEEVES		STEAM TRAP (FLOAT AND THERMOSTATIC INDICATED T.T. THERMOSTAT, B.T. BUCKET TRAP)
	PIPE ELBOW TURNED DOWN		CONCENTRIC REDUCER/INCREASER
	PIPE ELBOW TURNED UP		ECCENTRIC REDUCER/INCREASER
	PIPING TEE-DOWN		HOSE BIBB
	PIPING TEE-UP		WALL HYDRANT
	PIPE RISER		DIRECTION OF FLOW
	FLOOR CLEAN OUT		FIRE DEPARTMENT CONNECTION
	CLEAN OUT		PUMP
	WALL CLEAN OUT		WATER HAMMER SUPPRESSER
	PIPE PITCHES DOWN		FINNED TUBE BASEBOARD
	GENERIC VALVE, SEE SPECIFICATIONS FOR TYPE		HUMIDIFIER
	GATE VALVE		DIFFERENTIAL PRESSURE TRANSMITTER
	BALL VALVE		SPRINKLER HEAD
	BUTTERFLY VALVE (MANUAL)		GAS TURRET
	2-WAY CONTROL VALVE		MEDICAL OXYGEN OUTLET
	3-WAY CONTROL VALVE		MEDICAL VACUUM INLET
	CHECK VALVE		MEDICAL AIR OUTLET
	PLUG VALVE		NITROUS OXIDE OUTLET
	GLOBE VALVE		
	NEEDLE VALVE		
	BACK FLOW PREVENTER		
	SOLENOID VALVE		
	PRESSURE REDUCING OR REGULATING VALVE		
	PRESSURE RELIEF VALVE		
	STRAINER		
	STRAINER W/BLOWDOWN		
	MANUAL AIR VENT		
	AUTOMATIC AIR VENT		
	PRESSURE SWITCH		
	FLOW SWITCH		
	PRESSURE GAUGE AND COCK		
	THERMOMETER AND WELL		
	TEMPERATURE & PRESSURE TAP (PETE'S PLUG)		
	HOSE END DRAIN VALVE WITH CAP		

ABBREVIATIONS

AAV	AUTOMATIC AIR VENT	EA	EXHAUST AIR	PAE	PROCESS ACID EXHAUST
ACC	AIR COOLED CONDENSER	EF	EXHAUST FAN	PHE	PROCESS HEAT EXHAUST
ACU	AIR CONDITIONING UNIT	ENC	ENCLOSURE	PSE	PROCESS SOLVENT EXHAUST
AD	ACCESS DOOR	ER	EXHAUST REGISTER	PP	POLY-PROPYLENE
AE	ACID EXHAUST	(E)	EXISTING	PPE	PRE PURCHASED EQUIPMENT
AFF	ABOVE FINISHED FLOOR	EXIST.	EXISTING	PRS	PRESSURE REDUCING STATION
AHU	AIR HANDLING UNIT	FBO	FURNISHED BY OWNER	PRV	PRESSURE REDUCING VALVE
AP	ACCESS PANEL	FCB	FACE AND BYPASS	PVD	PNEUMATIC VOLUME DAMPER
ATC	AUTOMATIC TEMPERATURE CONTROL	FC	FLEXIBLE CONNECTION	(R)	REMOVE
AV	AIR VENT	FCO	FLOOR CLEANOUT	RA	RETURN AIR
BA	BREATHING COMPRESSED AIR	FD-#	FLOOR DRAIN TAG	(REL.)	RELOCATED
BB	BASEBOARD	FD	FIRE DAMPER	RF	RETURN FAN
BDD	BACKDRAFT DAMPER	FG	FIBERGLASS	RG	RETURN GRILLE
BG	BLAST GATE	F & T	FLOAT AND THERMOSTATIC	RHC	REHEAT COIL
BFP	BACKFLOW PREVENTER	FRHB	FREEZE RESISTANT HOSE BIBB	RM	ROOM
BLDG	BUILDING	FTR	FINNED TUBE RADIATION	RPZ	REDUCED PRESSURE ZONE BFP
BOD	BOTTOM OF DUCT	FS	FLOW SWITCH	RR	RETURN REGISTER
BOP	BOTTOM OF PIPE	GC	GENERAL CONTRACTOR	RV	RELIEF VALVE
BTU	BRITISH THERMAL UNIT	GPM	GALLONS PER MINUTE	SA	SUPPLY AIR
CB	COUNTER BALANCED DAMPER	H	HUMIDIFIER	SCV	SELF CONTAINED VALVE
CD	CEILING DIFFUSER	HB	HOSE BIB	SD	SMOKE DETECTOR
CF	CAPPED FOR FUTURE	HRU	HEAT RECOVERY UNIT	SF	SUPPLY FAN
CFM	CUBIC FEET PER MINUTE	HTR	HEATER	SG	SUPPLY GRILLE
CLG	CEILING	H & V	HEATING AND VENTILATION	SR	SUPPLY REGISTER
CO	CLEANOUT	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	TE	TEMPERATURIZED ELEMENT (SENSOR)
CONT	CONTINUATION	HW	HOT WATER	TG	TRANSFER GRILLE
COORD	COORDINATE	HX	HEAT EXCHANGER	TOD	TOP OF DUCT
CT	COOLING TOWER	IN WG	INCHES WATER GAUGE	TOP	TOP OF PIPE
CTE	CONNECT TO EXISTING	LD	LINED DUCT	TTS	TIGHT TO STEEL
CU	COPPER	MAU	MAKE UP AIR UNIT	TV	TURNING VANE(S)
CUH	CABINET UNIT HEATER	MAX	MAXIMUM	TYP	TYPICAL
CV	CONTROL VALVE	MBH	1000 BTU/HR.	UH	UNIT HEATER
CW	COLD WATER	ME	MECHANICAL ENGINEER	UIC	UP IN CHASE
CW-P	CITY WATER-PROCESS	MFR	MANUFACTURER	UIW	UP IN WALL
DC	DOUBLE CONTAINED	MIN	MINIMUM	UV	UNIT VENTILATOR
DDC	DIRECT DIGITAL CONTROL	MOD	MOTOR OPERATED DAMPER	VB	VACUUM BREAKER
DIA	DIAMETER	MPV	MULTI-PURPOSE VALVE	VTR	VENT THRU ROOF
DIC	DOWN IN CHASE	MUA	MAKE UP AIR	VD	MANUAL VOLUME DAMPER
DIW	DOWN IN WALL	NPW	NON-POTABLE WATER	VCFF	VALVED AND CAPPED FOR FUTURE
DN	DOWN	NTS	NOT TO SCALE	VOC	VOLATILE ORGANIC COMPOUNDS
DS	DOWNSPOUT	OA	OUTSIDE AIR	W/	WITH
DT	DROP AND TRANSITION	OBD	OPPOSED BLADE DAMPER	WCO	WALL CLEANOUT
DWG	DRAWING	OED	OPEN ENDED DUCT	WH	WALL HYDRANT
DWH	DOMESTIC WATER HEATER	P-#	PLUMBING FIXTURE TAG		
		PEA	ALKALI EXHAUST		
		PEH	HEAT EXHAUST		

PIPING SYSTEMS

10:1 HF	10:1 HF	---HCR---	HOT/ CHILLED WATER RETURN	---PCWR---	PROCESS COOLING WATER RETURN
AV	ACID VENT	---HCS---	HOT/ CHILLED WATER SUPPLY	PC	PUMPED STEAM CONDENSATE
AD	ACID DRAIN	---HCV---	HOUSE CLEAN VACUUM	PD	PUMPED DISCHARGE
---AD---	ACID DRAIN (BELOW SLAB)	---HG---	HOT GAS	---POS. SOLV---	POSITIVE SOLVENT DRAIN
BA	BREATHING AIR	---HPS---	HIGH PRESSURE STEAM	---PW---	POTABLE WATER
CD	CONDENSATE DRAIN	---HPR---	HIGH PRESSURE CONDENSATE RETURN	R	RELIEF LINE
CDA	COMPRESSED DRY AIR	---HWS---	HOT WATER SUPPLY	---RL---	REFRIGERANT LIQUID
CHWS	CHILLED WATER SUPPLY	---HWR---	HOT WATER RETURN	---RS---	REFRIGERANT SUCTION
---CHWR---	CHILLED WATER RETURN	---IAD---	ISOPROPYL ALCOHOL DRAIN	S	SANITARY
CWS	CONDENSER WATER SUPPLY	---LP---	LIQUID PROPANE GAS	---S---	SANITARY (UNDER SLAB)
---CWR---	CONDENSER WATER RETURN	---HLP---	HIGH PRESSURE LIQUID PROPANE GAS	SD	STORM DRAIN
DB	DISTRIBUTION VALVE BOX	---LPS---	LOW PRESSURE STEAM	---SD---	STORM DRAIN (UNDER SLAB)
DIS	DEIONIZED WATER SUPPLY	---LPR---	LOW PRESSURE RETURN	---SLD---	MIXED SOLVENT DRAIN
---DIR---	DEIONIZED WATER RETURN	MA	MEDICAL AIR	SV	SOLVENT
EKCD	EKC DRAIN	---MPS---	MEDIUM PRESSURE STEAM	SP	SPRINKLER
ESEW	EYEWASH	---MPR---	MEDIUM PRESSURE RETURN	TWS	TEMPERED CHILLED WATER SUPPLY
FCS	FREE COOLING SUPPLY	MV	MEDICAL VACUUM	---TWR---	TEMPERED CHILLED WATER RETURN
---FCR---	FREE COOLING RETURN	N2NP	NON-PROCESS NITROGEN	V	VENT
FOS	FUEL OIL SUPPLY	N2	PROCESS NITROGEN	VAC	PLANT VACUUM
---FOR---	FUEL OIL RETURN	NG	NATURAL GAS	ZB	ZONE VALVE BOX
FOV	FUEL OIL VENT	---HNG---	HIGH PRESSURE NATURAL GAS		
---GCR---	GRAVITY STEAM CONDENSATE RETURN	NO	NITROUS OXIDE		
GLY	GLYCOL	---NEG. SOLV.---	NEGATIVE SOLVENT DRAIN	---TEMP---	DOMESTIC HOT WATER (TEMP °F)
GV	GAS VENT	NPW	NON POTABLE COLD WATER	---TEMP---	RECIRC. DOMESTIC HOT WATER (TEMP °F)
H	HYDROGEN	OX	OXYGEN	---CW---	DOMESTIC COLD WATER
H2O2	HYDROGEN PEROXIDE	OFA	OIL FREE COMPRESSED AIR	---HW---	DOMESTIC HOT WATER
				---RCW---	RECIRCULATED DOMESTIC HOT WATER

GENERAL NOTE

1. ALL GENERAL NOTES, SYMBOL LISTS, AND DETAILS ARE TO BE CONSIDERED AS APPLICABLE TO ALL HVAC DRAWINGS FOR THIS PROJECT. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT INDICATE THEIR INCORPORATION INTO THE DESIGN.

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