

## AIR DISTRIBUTION SYMBOLS

	RECTANGULAR DUCT. (FIRST NUMBER IS SIDE SHOWN) 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.
	EA EXHAUST AIR
	RA RETURN AIR
	SA SUPPLY AIR
	VOLUME DAMPER
	FIRE DAMPER
	SMOKE DAMPER
	COMBINATION SMOKE/FIRE DAMPER
	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
	SMOKE DETECTOR
	S-3 DIFFUSER, REGISTER OR GRILLE TAG 300 CFM AIR FLOW TYP. 3 QUANTITY
	FIR-2 FINNED TUBE TAG 20 LENGTH OF FINNED ELEMENT
	A1 DETAIL NO. MH401 SHEET NO. WHERE DETAIL IS LOCATED
	CUH EQUIPMENT TAG 2 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, T.D. THERMODYNAMIC TRAP)
	PIPE ELBOW TURNED DOWN		CONCENTRIC REDUCER/INCREASER
	PIPE ELBOW TURNED UP		ECCENTRIC REDUCER/INCREASER
	PIPING TEE-DOWN		DIRECTION OF FLOW
	PIPING TEE-UP		PUMP
	PIPE RISER		FINNED TUBE BASEBOARD
	PIPE PITCHES DOWN		HUMIDIFIER
	GATE VALVE		DIFFERENTIAL PRESSURE TRANSMITTER
	BALL VALVE		
	BUTTERFLY VALVE (MANUAL)		
	2-WAY CONTROL VALVE		
	3-WAY CONTROL VALVE		
	BALANCING VALVE (CIRCUIT SETTER)		
	CHECK VALVE		
	PLUG VALVE		
	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	ENC	ENCLOSURE	PSE	PROCESS SOLVENT EXHAUST
ACC	AIR COOLED CONDENSER	ER	EXHAUST REGISTER	PP	POLY-PROPYLENE
ACU	AIR CONDITIONING UNIT	(E)	EXISTING	PPE	PRE PURCHASED EQUIPMENT
AD	ACCESS DOOR	EXIST.	EXISTING	PRS	PRESSURE REDUCING STATION
AE	ACID EXHAUST	FBO	FURNISHED BY OWNER	PRV	PRESSURE REDUCING VALVE
AF	ABOVE FINISHED FLOOR	FBP	FACE AND BYPASS	PVD	PNEUMATIC VOLUME DAMPER
AFMS	AIR FLOW MEASURING STATION	FC	FLEXIBLE CONNECTION	(R)	REMOVE
AHU	AIR HANDLING UNIT	FD	FIRE DAMPER	RA	RETURN AIR
ATC	AUTOMATIC TEMPERATURE CONTROL	FG	FIBERGLASS	(REL.)	RELOCATED
AV	AIR VENT	F & T	FLOAT AND THERMOSTATIC	RF	RETURN FAN
BB	BASEBOARD	FO	FLAT OVAL	RG	RETURN GRILLE
BDD	BACKDRAFT DAMPER	FTR	FINNED TUBE RADIATION	RHC	REHEAT COIL
BG	BLAST GATE	FS	FLOW SWITCH	RM	ROOM
BLDG	BUILDING	GC	GENERAL CONTRACTOR	RR	RETURN REGISTER
BOD	BOTTOM OF DUCT	GPM	GALLONS PER MINUTE	RV	RELIEF VALVE
BOP	BOTTOM OF PIPE	H	HUMIDIFIER	SA	SUPPLY AIR
BTU	BRITISH THERMAL UNIT	HB	HOSE BIB	SCV	SELF CONTAINED VALVE
CBD	COUNTER BALANCED DAMPER	HRU	HEAT RECOVERY UNIT	SD	SMOKE DETECTOR
CD	CEILING DIFFUSER	HTR	HEATER	SG	SUPPLY FAN
CFF	CAPPED FOR FUTURE	H & V	HEATING AND VENTILATION	SG	SUPPLY GRILLE
CFM	CUBIC FEET PER MINUTE	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	SR	SUPPLY REGISTER
CLG	CEILING	HW	HOT WATER	SS	STAINLESS STEEL
CONT	CONTINUATION	HX	HEAT EXCHANGER	TE	TEMPERATURIZED ELEMENT (SENSOR)
COORD	COORDINATE	IN WG	INCHES WATER GAUGE	TG	TRANSFER GRILLE
CP	CONDENSATE PUMP & RECEIVER	LD	LINED DUCT	TOD	TOP OF DUCT
CT	COOLING TOWER	MAU	MAKE UP AIR UNIT	TOP	TOP OF PIPE
CTE	CONNECT TO EXISTING	MAX	MAXIMUM	TTS	TIGHT TO STEEL
CU	COPPER	MBH	1000 BTU/HR.	TV	TURNING VANE(S)
CUH	CABINET UNIT HEATER	ME	MECHANICAL ENGINEER	TYP	TYPICAL
CV	CONTROL VALVE	MFR	MANUFACTURER	UH	UNIT HEATER
CW	COLD WATER	MIN	MINIMUM	UIC	UP IN CHASE
DC	DOUBLE CONTAINED	MD	MOTOR OPERATED DAMPER	UIW	UP IN WALL
DCC	DIRECT DIGITAL CONTROL	MPV	MULTI-PURPOSE VALVE	UV	UNIT VENTILATOR
DIA	DIAMETER	MTD	MOUNTED	VAV	VARIABLE AIR VOLUME BOX
DIC	DOWN IN CHASE	MUA	MAKE UP AIR	VB	VACUUM BREAKER
DIW	DOWN IN WALL	NPW	NON-POTABLE WATER	VTR	VENT THRU ROOF
DN	DOWN	NTS	NOT TO SCALE	VD	MANUAL VOLUME DAMPER
DT	DROP AND TRANSITION	OA	OUTSIDE AIR	VCFF	VALVED AND CAPPED FOR FUTURE
DWG	DRAWING	OBD	OPPOSED BLADE DAMPER	VFD	VARIABLE FREQUENCY DRIVE
DWH	DOMESTIC WATER HEATER	OED	OPEN ENDED DUCT	VOC	VOLATILE ORGANIC COMPOUNDS
EA	EXHAUST AIR	PAE	PROCESS ACID EXHAUST	W/	WITH
EF	EXHAUST FAN	PHE	PROCESS HEAT EXHAUST		

## PIPING SYSTEMS

CD	CONDENSATE DRAIN	HG	HOT GAS	RL	REFRIGERANT LIQUID
CHWS	CHILLED WATER SUPPLY	HPS	HIGH PRESSURE STEAM	RS	REFRIGERANT SUCTION
CHWR	CHILLED WATER RETURN	HPR	HIGH PRESSURE CONDENSATE RETURN	TWS	TEMPERED CHILLED WATER SUPPLY
CWS	CONDENSER WATER SUPPLY	HWS	HOT WATER SUPPLY	TWR	TEMPERED CHILLED WATER RETURN
CWR	CONDENSER WATER RETURN	HWR	HOT WATER RETURN	ZB	ZONE VALVE BOX
DB	DISTRIBUTION VALVE BOX	LPS	LOW PRESSURE STEAM		
FCS	FREE COOLING SUPPLY	LPR	LOW PRESSURE RETURN		
FCR	FREE COOLING RETURN	MPS	MEDIUM PRESSURE STEAM		
FOS	FUEL OIL SUPPLY	MPR	MEDIUM PRESSURE RETURN		
FOR	FUEL OIL RETURN	NPW	NON POTABLE COLD WATER		
FOV	FUEL OIL VENT	PCWR	PROCESS COOLING WATER RETURN		
GCR	GRAVITY STEAM CONDENSATE RETURN	PC	PUMPED STEAM CONDENSATE		
GLY	GLYCOL	PD	PUMPED DISCHARGE		
HCR	HOT/ CHILLED WATER RETURN	PW	POTABLE WATER		
HCS	HOT/ CHILLED WATER SUPPLY	R	RELIEF LINE		

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