

AIR DISTRIBUTION SYMBOLS

- RECTANGULAR DUCT. (FIRST NUMBER IS SIDE SHOWN)
DIMENSIONS IN INCHES
- 12" Ø 12 INCH ROUND DUCT
- MD MOTORIZED DAMPER
- FLEXIBLE DUCT
- FC DUCT FLEXIBLE CONNECTOR (FC)
- D R 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
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
- SMOKE DETECTOR
- S-3 DIFFUSER, REGISTER OR GRILLE TAG
300 CFM AIR FLOW QUANTITY
TYP. 3
- FIR-2 FINNED TUBE TAG
20 LENGTH OF FINNED ELEMENT
- A1 DETAIL NO.
MH401 SHEET NO. WHERE DETAIL IS LOCATED
- CUH 2 EQUIPMENT TAG
EQUIPMENT NO.

PIPING SYMBOLS

- UNION
- FLANGE
- PIPE ANCHOR
- PIPE GUIDE OR SLEEVES
- PIPE ELBOW TURNED DOWN
- PIPE ELBOW TURNED UP
- PIPING TEE-DOWN
- PIPING TEE-UP
- PIPE RISER
- PIPE PITCHES DOWN
- GENERIC VALVE, SEE SPECIFICATIONS FOR TYPE
- GATE VALVE
- 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
- ORIFICE FLOWMETER
- FLEXIBLE PIPE CONNECTOR
- EXPANSION JOINT
- STEAM TRAP (FLOAT AND THERMOSTATIC INDICATED T.T. THERMOSTAT, B.T. BUCKET TRAP, T.D. THERMODYNAMIC TRAP)
- CONCENTRIC REDUCER/INCREASER
- ECCENTRIC REDUCER/INCREASER
- DIRECTION OF FLOW
- PUMP
- FINNED TUBE BASEBOARD
- HUMIDIFIER
- DIFFERENTIAL PRESSURE TRANSMITTER

ABBREVIATIONS

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|-------|-------------------------------|--------|---|--------|---------------------------------|
| 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 |
| AFF | 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 | SF | 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 |
| DDC | 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 | VCF | 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

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|----------|---------------------------------|----------|---------------------------------|---------|-------------------------------|
| — 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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