

three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot

DUCTWORK, AIR DISTRIBUTION

SINGLE

DOUBLE

RECTANGULAR DUCT

ROUND DUCT

FLAT OVAL DUCT

DUCT WITH ACOUSTIC LINING

SUPPLY GRILLE OR REGISTER

RETURN/EXHAUST GRILLE OR REGISTER

CEILING DIFFUSER - SQUARE/ROUND (SIMILAR)  
(FLOW ARROWS INDICATE DIRECTION OF THROW  
FOUR WAY FLOW IF NO ARROWS SHOWN)

RETURN/EXHAUST GRILLE OR REGISTER

SUPPLY DUCT UP

SUPPLY DUCT DOWN

RETURN/EXHAUST DUCT UP

RETURN/EXHAUST DUCT DOWN

CHANGE OF ELEVATION (RISE/R) DROP/D)

TRANSITION - RECTANGULAR OR ROUND

TRANSITION - RECTANGULAR TO ROUND

BRANCH DUCT - STANDARD(45° ENTRY)

BRANCH DUCT WITH SPLITTER

BRANCH DUCT WITH AIR EXTRACTOR

BRANCH DUCT, STRAIGHT LATERAL, ROUND

BRANCH DUCT, STRAIGHT TEE, ROUND

BRANCH DUCT, LO-LOSS TEE, ROUND

BRANCH DUCT, CONICAL TEE, ROUND

BRANCH DUCT, CONICAL TEE, FLEX  
TAKE OFF, SPIN-IN COLLAR W/ DAMPER

FLEXIBLE DUCT

MATERTIGHT DUCT

CONTROL DAMPER (MOD OR MVD)

SAFETY DAMPER (FDR OR SDR)

SQUARE ELBOW WITH TURNING VANES

FLEXIBLE DUCT CONNECTION

PIPING - GENERAL

DIRECTION OF FLOW

DIRECTION OF SLOPE DOWN

PIPE TURNING UP

PIPE TURNING DOWN

BRANCH CONNECTION - TOP

BRANCH CONNECTION - BOTTOM

BRANCH CONNECTION - SIDE

PIPE ANCHOR

PIPE ALIGNMENT GUIDE

SERVICE VALVE (GATE, BALL OR BUTTERFLY)

GLOBE VALVE

CHECK VALVE

BALANCING COCK

UNION

VALVE IN RISER

PIPE CAP OR BLIND FLANGE

OUTLETS (G, A, V, OX, CV, HW)

EXPANSION JOINT

PRESSURE REDUCING VALVE

PRESSURE RELIEF VALVE

PRESSURE GAUGE

THERMOMETER

FLEXIBLE PIPE CONNECTION OR JOINT

STRAINER

CLEANOUT PLUG

FLOOR CLEANOUT

WALL CLEANOUT

FLOW SWITCH

PRESSURE SWITCH

PIPING - HVAC

STEAM (NUMBER DENOTES PRESSURE)

STEAM CONDENSATE RETURN (SCR)

BOILER BLONDOWN

PUMPED CONDENSATE

COLD WATER

DRIP STATION

THERMOSTATIC TRAP

FLOAT AND THERMOSTATIC TRAP

BUCKET TRAP

HEATING WATER SUPPLY

HEATING WATER RETURN

CHILLED WATER SUPPLY

CHILLED WATER RETURN

CONDENSER WATER SUPPLY

CONDENSER WATER RETURN

CONDENSATE DRAIN

CONTROL VALVE (2-WAY)

CONTROL VALVE (3-WAY)

AUTOMATIC FLOW CONTROL VALVE

CALIBRATED BALANCING VALVE

TRIPLE DUTY VALVE (PUMP DISCHARGE)

PRESSURE/TEMPERATURE FITTINGS

REFRIGERANT SUCTION

REFRIGERANT DISCHARGE

REFRIGERANT LIQUID

HEAT PUMP WATER SUPPLY

HEAT PUMP WATER RETURN

DUAL TEMP SUPPLY

DUAL TEMP RETURN

PIPING - SPECIAL

COMPRESSED AIR

GAS

FUEL OIL SUPPLY

FUEL OIL RETURN

GLYCOL SUPPLY

GLYCOL RETURN

MISCELLANEOUS

CONNECT NEW TO EXISTING

ELECTRIC THERMOSTAT (OR SENSOR)

PNEUMATIC THERMOSTAT

DIAMETER

FLAT OVAL

HUMIDISTAT

FAN SPEED SWITCH

DUCT-MOUNTED SMOKE DETECTOR

PIPE AND DUCT  
RISER REFERENCE

AQUASTAT

GAS COCK

BACKFLOW PREVENTOR

NEW WORK

EXISTING TO REMAIN

EXISTING TO BE REMOVED

AAV

AD

AE

AFCV

APD

AQ

ATD

BG

BHP

BOD

BR

BTU

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FSDR

GAL

GPD

GPH

GP

HB

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HPR

HPS

HW

HWR

HWS

HZ

KW

KWH

LAT

LBHR

LD

LG

LR

LMT

MANUAL AIR VENT

BTU PER HOUR (THOUSANDS)

MOTOR OPERATED DAMPER

MEDIUM PRESSURE STEAM RETURN

MEDIUM PRESSURE STEAM SUPPLY

MANUAL VOLUME DAMPER

NOISE CRITERIA

OPEN END DUCT

OVERFLOW DRAIN

OUTSIDE AIR

OPPOSED BLADE DAMPER

OVERSIDE TIE-VER

OPEN TO CEILING FLENUM

POST INDICATOR VALVE

PRESSURE REDUCING VALVE

POUNDS PER SQUARE INCH

RETURN AIR

RAIN CONDUCTOR

ROOF DRAIN

RELATIVE HUMIDITY

REVOLUTIONS PER MINUTE

SUPPLY AIR

SHOWER DRAIN, SPLITTER DAMPER,  
STORM DRAIN

SMOKE DAMPER

SNOKE DETECTOR

STATIC PRESSURE

SANITARY SEWER

STAINLESS STEEL

SERVICE VALVE

SKITCH

TIME CLOCK

TEMP

TEMPERATURE DIFFERENTIAL

TOP GRILLE/TRANSFER GRILLE

TOP REGISTER, TONS OF REFRIGERATION

THERMOSTAT

DOOR UNDERCUT

VOLT. VENT

VACUUM

VARIABLE AIR VOLUME

VENT THROUGH ROOF

WASTE, WATTS

NET BULB, °F

WATER GAUGE (FEET OR INCHES)

WATER STOP

WATER ARRESTOR

WATER PRESSURE DROP, FT. IN.

WATER STOP

WATER TEMPERATURE DROP, °F

WATER TEMPERATURE RISE, °F

NOVEN WIRE MESH

ZONE

THESE SYMBOLS AND ABBREVIATIONS ARE MECHANICAL DEPARTMENT STANDARDS AND MAY NOT  
NECESSARILY BE APPLICABLE TO OR APPEAR ON THESE DRAWINGS. HOWEVER, WHEREVER THESE  
SYMBOLS DO OCCUR ON THE DRAWINGS, THE ITEM SHALL BE PROVIDED AND INSTALLED. SEE  
ARCHITECTURAL DRAWINGS FOR ADDITIONAL SYMBOLS AND ABBREVIATIONS.

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