HVAC, COMBUSTION AIR & FLUE GAS SYMBOLS

DUCTS

- DUCTED AIR FLOW (FURN. & INST. BY HVAC OR COMBUSTION AIR & FLUE GAS DUCT CONTRACTORS)
- DUCTED AIR FLOW (FURN. & INST. BY OTHERS)
- NON-DUCTED AIR FLOW

DAMPERS

- DAMPER EQUIPMENT NUMBER (TYPICAL)
- OPPOSED BLADE
- CD — CONTROL DAMPER; SD — SHUTOFF DAMPER — TYPICAL
- NO — NORMALLY OPEN; FO — FAIL OPEN; FL — FAIL LOCK; FI — FAIL INTERMEDIATE; NC — NORMALLY CLOSED; FC — FAIL CLOSED — TYPICAL
- PARALLEL BLADE
- FAN INLET VANES
- BUTTERFLY — NORMALLY CLOSED / NORMALLY OPEN
- GRAVITY SHUTTER
- FIRE DAMPER WITH FUSIBLE LINK
- GUILLOTINE DAMPER

FILTERS

- PRE-FILTER
- MED. EFF. FILTER
- HEPA FILTER
- CHARCOAL FILTER

EQUIPMENT (HVAC ONLY)

- CV — CONSTANT VOLUME BOX
- RH — TERMINAL REHEAT ATTENUATOR
- MB — MIXING BOX

ABBREVIATIONS (HVAC ONLY)

SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
OA	OUTSIDE AIR
MB	MIXING BOX
CV	CONSTANT VOLUME BOX
RH	TERMINAL REHEAT ATTENUATOR
H	HOT DUCT
C	COLD DUCT

ABBREVIATIONS (COMBUSTION AIR & FLUE GAS ONLY)

PA	PRIMARY AIR
SA	SECONDARY AIR
TA	TERTIARY AIR
FG	FLUE GAS
GR	GAS RECIRCULATION
TM	TEMPERING AIR
SL	SEAL AIR
IG	IGNITOR AIR

EQUIPMENT NUMBER (NOTE 1)

2 FW 01 P A

- A — OPTIONAL-PARALLEL OR DUPLICATE EQUIPMENT
- P — EQUIPMENT CATEGORY
- 01 — EQUIPMENT SEQUENTIAL NUMBER
- FW — STANDARD PLANT SYSTEM IDENTIFICATION CODE (SEE P&ID INDEX SHEET)
- 2 — PLANT UNIT NUMBER

PLANT EQUIPMENT CATEGORIES (NOTE 1)

(EXCLUDING INSTRUMENT & CONTROL DEVICES)

A	EXCHANGERS, CONDENSERS, COOLING TOWERS
B	BOILERS, STEAM GENERATORS, AUXILIARY BOILERS
C	COMPRESSORS, BLOWERS, VACUUM PUMPS, FANS, REFRIGERATION UNITS, INCLUDING DRIVERS
D	DEMINERALIZERS, ABSORBERS, ADSORBERS, CLARIFIERS, AIR DRYERS, EVAPORATORS
E	ELECTRICAL EQUIPMENT-SWITCHGEAR, MOTOR CONTROL CENTERS, TRANSFORMERS, ETC.
F	FILTERS, STRAINERS, TRAVELING SCREENS, RAKES COLD TRAPS, PRECIPITATORS, DUST COLLECTORS PURIFIERS, CENTRIFUGES
G	FUEL HANDLING EQUIPMENT INCLUDING NUCLEAR AND COAL FUELS, CRANES, HOISTS, BALERS, INCLUDING DRIVERS
H	PIPE SUPPORTING ELEMENTS INCLUDING HANGERS, SUPPORTS, SNUBBERS, RESTRAINTS, ETC
J	INSTRUMENT AND CONTROL BOARDS, PANELS AND CABINETS
K	TURBINES, TURBINE-GENERATORS, DIESEL-GENERATORS, DIESEL ENGINES, FLUID DRIVES, GEAR REDUCERS
M	PIPING SPECIALTIES - TRAPS, HOSES, EXPANSION JOINTS, RESTRICTION ORIFICES, ETC.
P	PUMPS, INCLUDING DRIVERS
R	REACTOR AND REACTOR CONTROL DEVICES
S	SPECIAL PACKAGED ITEMS OR SYSTEMS
T	TANKS
X	MISCELLANEOUS AIR HANDLING DEVICES
Y	DAMPERS

PIPE LINE NUMBER

(EXCLUDING INSTRUMENT SENSING & SIGNAL LINES)

2 FW 01 A A 18

- 18 — PIPE SIZE
- A — OPTIONAL - PARALLEL OR DUPLICATE LINES
- A — LINE SIZE, CLASS OR TABLE CHANGES
- 01 — LINE SERIAL NUMBER
- FW — STANDARD PLANT SYSTEM IDENTIFICATION CODE (SEE P&ID INDEX SHEET)
- 2 — PLANT UNIT NUMBER

INSTRUMENT SENSING PIPELINE NUMBER

(EXCLUDING CAPILLARY FILLED LINES)

2 FW 17A A 3/4

- A — PARALLEL AND DUPLICATE LINES
- 3/4 — PIPE SIZE (TAKE-OFF PIPE SIZE WHEN BRANCH LINES ARE NOT NUMBERED. LINE SIZE DETAILS PER INSTRUMENT INSTALLATION DETAILS)
- A — OPTIONAL - BRANCH LINE (NOT SHOWN ON LINE LIST. SEE SHEET 4 FOR EXAMPLE)
- 17 — SENSING LINE SERIAL NUMBER (INCLUDING BRANCH LINES)
- FW — STANDARD PLANT SYSTEM IDENTIFICATION CODE (SEE P & ID INDEX SHEET)
- 2 — PLANT UNIT NUMBER

VALVE NUMBER (NOTE 1)

2 FW 001 A

- A — OPTIONAL-PARALLEL SERVICE
- 001 — VALVE SEQUENTIAL NUMBER
- FW — STANDARD PLANT SYSTEM IDENTIFICATION CODE (SEE P&ID INDEX SHEET)
- 2 — PLANT UNIT NUMBER

NOTE 1: IN CERTAIN CASES, VENDOR NUMBERS MAY BE USED IN LIEU OF THIS FORMAT. SEE P & ID INDEX SHEET FOR SUCH EXCEPTIONS

PIPE LINE INSTRUMENT SYMBOLS

- FE — INSTRUMENT IDENT. NUMBER (TYPICAL)
- FLOW NOZZLE OR VENTURI
- FLOW NOZZLE OR VENTURI PIPE SECTION
- FLOW ORIFICE (ORIFICE FLANGES BY P. C., UNLESS OTHERWISE NOTED)
- FE — UNCLASSIFIED FLOW ELEMENT (MAGNETIC, TARGET, AIR FOIL, LAMINAR, ETC.)
- ROTAMETER
- PITOT TUBE (SINGLE OR MULTIPLE ELEMENT PITOT DEVICE)
- TURBINE METER
- FLOW STRAIGHTENING VANES
- AIR FILTER-PRV SET
- PROCESS RADIATION MONITOR (NON-INSERTED TYPE)
- RES. — CONSTANT HEAD CHAMBER (RESERVOIR)
- RES — CONSTANT HEAD CHAMBER (RESERVOIR WITH TEMP. EQUAL. COL.)
- WELL TYPE (TYPICAL)
- TEW — WELL
- FS — FLOW SWITCH
- AE — SAMPLE ELEMENT (ANALYSIS - CELL, PROBE, ETC.)

TEST CONNECTIONS

- P — PRESSURE
- G — GRAB SAMPLE
- T — TEMPERATURE (WHEN THERMOWELL IS NOT USED)
- F — FLOW
- V — HVAC DUCT TEST FOR PRESSURE, TEMPERATURE AND / OR FLOW

FOR REFERENCE ONLY SPEC. NO. H-2999 DATE REL'D 02-12-81

TERA APERTURE CARD

P & ID STANDARD SYMBOLS DRAWING		
DATE	APPROVED	STANDARD
3-12-73		MF-270.10.1 SH. 2 OF 4

DRAWING RELEASE RECORD

REV.	SPEC. NO.	DATE	DRAWN	CHECKED	ENGR. APPROVAL	DESCRIPTION	FILM
	H-2255	9/9/75				M-20 SHT. 3 OF 5 WAS BHT. MF-270.10.1 SHT. 2 OF 4	X

DRAWING RELEASE RECORD

REV.	SPEC. NO.	DATE	DRAWN	CHECKED	ENGR. APPROVAL	DESCRIPTION	FILM

DO NOT USE I, O, Q OR J FOR REVISION

DRAWN	NONE SCALE	PROJECT NUMBER 4190
CHECKED	9-8-75 DATE	
ENGINEER	9-8-75 DATE	
APPROVED	9-8-75 DATE	

P&ID INDEX & SYMBOLS

MIDL. ZIMMER NUCLEAR POWER STATION UNIT-1
THE CINCINNATI GAS & ELECTRIC COMPANY
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY
THE DAYTON POWER AND LIGHT COMPANY

SARGENT & LUNDY ENGINEERS CHICAGO

DRAWING NO. M-20 REV.

SHEET 3 OF 5

RIDS-PDR

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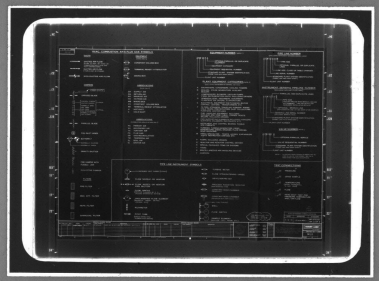

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