

PROCESS FLOW DIAGRAMS AND P&ID SYMBOLS (GENERAL INSTRUMENT OR FUNCTION SYMBOLS)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	ANGLE VALVE		RUPTURE DISK OR SAFETY HEAD FOR PRESSURE RELIEF		IN-LINE FILTER		AXIAL FAN		SINGLE DUCT VARIABLE VOLUME BOX
	BUTTERFLY VALVE		PILOT LIGHT X=COLOR R=RED G=GREEN		ATMOSPHERIC FILTER		AXIAL FAN WITH VARIABLE INLET VANES		WING TYPE FACE AND BYPASS DAMPER (A) HW HEATING WATER DX DIRECT EXPANSION CH CHILLED WATER STM STEAM (B) HCL HEATING COIL CCL COOLING COIL
	ROTARY VALVE		FLEX CONNECTION (RUBBER)		DOUBLE BASKET STRAINER		2-STAGE RECIPROCATING AIR COMPRESSOR		COLLECTION BIN
	3-WAY VALVE		FLEX CONNECTION (STEEL BRAIDED)		HOSE REEL		SINGLE STAGE RECIPROCATING AIR COMPRESSOR		CYCLONE SEPARATOR
	4-WAY VALVE		SINGLE PITOT TUBE OR PITOT VENTURI TUBE		OPEN DRAIN (SHOWN)		2-STAGE ROTARY SCREW AIR COMPRESSOR		FLUID RECOVERY PUMP
	OS & Y VALVE		FLOW METER		XX- DRAIN SYSTEM ANNOTATIONS DRAIN (PLAN VIEW)		RECIPROCATING PUMP		DUAL SERVICE HEAT EXCHANGER
	DIAPHRAM VALVE		FLOW NOZZLE OR VENTURI		CLEANOUT (PLAN VIEW)		PRESSURE VESSELS, VERTICAL (SHOWN) OR HORIZONTAL (TANKS, RECEIVERS, SEPARATORS, SUMPS ETC.)		MULTI BLADE DAMPER
	PRESSURE RELIEF		REDUCER		SANITARY VENT		HVAC COIL (A) HW HEATING WATER DX DIRECT EXPANSION CH CHILLED WATER STM STEAM (B) HCL HEATING COIL CCL COOLING COIL		SINGLE BLADE DAMPER
	DIAPHRAM ACTUATOR		SCREWED CAP		SILENCER/MUFFLER		UNIT HEATER (A) HW HEATING WATER DX DIRECT EXPANSION STM STEAM (B) HCL HEATING COIL		MOTOR
	TWO-WAY VALVE, FAIL CLOSED		PIPE CAP		SPACE PENETRATIONS		TEST PORT		PILOT LIGHT
	TWO-WAY VALVE, FAIL OPEN		HOSE CONNECTION		FIXED LOUVERS		SEPARATOR		MIST ELEMINTOR
	3-WAY VALVE W/DIAPHRAM ACTUATOR		FLANGED CONNECTION (PIPING OR EQUIP)		TRAP XX ANNOTATES FUNCTION		HEPA FILTER		CARBON ABSORBER FILTER
	4-WAY VALVE W/DIAPHRAM ACTUATOR		FLOW ORIFICE FIXED		LUBRICATOR		SUCTION DIFFUSER		
	SPRING-OPPOSED SINGLE-ACTING ACTUATOR		STRAINER WITH VALVE		55 GALLON DRUM				
	SPRING-OPPOSED DOUBLE-ACTING ACTUATOR		Y-STRAINER		THERMOSTATIC VENT				
	ELECTROHYDRAULIC ACTUATOR		COMPRESSED AIR		SPRINKLER ALARM (WATER MOTOR GONG)				
	HAND ACTUATOR OR HANDWHEEL		DUCTED AIR FLOW FROM SPACE		FLOW ALARM VALVE				
	RESRICTION ORIFICE IN PROCESS LINE		CAPPED AIR DUCT		COOLING TOWER				
	RESTRICTION ORIFICE DRILLED IN VALVE		GATE VALVE (OPEN)		CHILLER				
	FLOW STRAIGHTING VANE		GATE VALVE (CLOSED)		HORIZONTAL CENTRIFUGAL PUMP				
	DIAPHRAM PRESSURE-BALANCED		GLOBE VALVE (OPEN)		CENTRIFUGAL FAN WITH VARIABLE INLET VANES				
	PRESSURE-REDUCING REGULATOR, SELF-CONTAINED, WITH HANDWHEEL ADJUSTABLE SET POINT		GLOBE VALVE (CLOSED)		BLOWER/CENTRIFUGAL FAN				
	PRESSURE REDUCING REGULATOR WITH EXTERNAL PRESSURE TAP		NEEDLE VALVE (OPEN)		ROTARY PUMP				
	DIFFERENTIAL-PRESSURE-REDUCING REGULATOR WITH INTERNAL AND EXTERNAL TAPS		NEEDLE VALVE (CLOSED)		VERTICAL WET PIT PUMP				
	BACKPRESSURE REGULATOR, SELF-CONTAINED		PLUG VALVE (OPEN)		PROGRESSIVE CAVITY PUMP				
	BACKPRESSURE REGULATOR WITH EXTERNAL PRESSURE TAP		PLUG VALVE (CLOSED)		VERTICAL SUMP PUMP				
	PRESSURE-REDUCING REGULATOR WITH INTEGRAL OUTLET PRESSURE RELIEF VALVE, AND OPTIONAL PRESSURE INDICATOR		BALL VALVE (OPEN)		HEATER				
	PRESSURE INDICATOR		BALL VALVE (CLOSED)		HEAT EXCHANGER				
	FLOW DIRECTION		CHECK VALVE		AXIAL FAN				
	PRESSURE RELIEF OR SAFETY VALVE		SPRING CHECK VALVE						
	VACUUM RELIEF VALVE		ANGLE VALVE (OPEN)						
	PRESSURE RELIEF OR SAFETY VALVE, STRAIGHT-THROUGH PATTERN, SPRING- OR WEIGHT-LOADED, OR WITH INTREGAL PILOT		ANGLE VALVE (CLOSED)						
	RUPTURE DISK OR SAFETY HEAD FOR VACUUM RELIEF		SAFETY OR RELIEF VALVE (INLET PORT SHOWN CLOSED)						
			THREE-WAY VALVE (CLOSED PORT DARKENED)						
			FOUR-WAY VALVE (ARROWS INDICATE FLOW DIRECTION)						
			BALL-CHECK VALVE						
			DUAL PURGE VALVE						
			ALARM VALVE						
			AIR INTAKE FILTER						
			ALARM						
			BUBBLE GAUGE						

GENERAL NOTES

- M-0001 IS A STANDARD PIPING AND INSTRUMENTATION DIAGRAM LEGEND SHEET.
- FOR DRAWING TITLE BLOCK CONTENTS REFER TO THE DRAFTING MANUAL SECTION 202.10.
- THE SHEET NUMBER IN THE TITLE BLOCK IS A REFERENCE NUMBER FOR THIS MANUAL.

NO	DATE	CLASS	REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP	
FACILITY & WASTE OPERATIONS SYSTEMS ENGINEERING & MAINTENANCE										
PROCESS FLOW DIAGRAMS AND P&ID SYMBOLS					DRAWN DESIGN CHECKED	DRAFTER DESIGN(S) CHECKER				
PROCESS FLOW AND P&ID AND INSTRUMENTATION DIAGRAM LEGEND										
BLDG. XX SUBMITTED					TA-XX DATE MM-DD-YY					
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