

LINE TYPE AND SYMBOLS

	MAIN PROCESS LINES
	SECONDARY PROCESS LINE
	COVERED CHANNEL
	OPEN CHANNEL
	INSTRUMENT SUPPLY OR CONNECTION TO PROCESS
	UNDEFINED SIGNAL
	PNEUMATIC SIGNAL
	ELECTRICAL SIGNAL
	ELECTRICAL SIGNAL (DIGITAL)
	SOFTWARE LINK
	TERMINATION POINT
	EXISTING
	NEW
	IN LEFT/OUT RIGHT
	OUT LEFT/IN RIGHT
	LIQUID FLOW ARROW
	CONNECTION (OF LINES)

FITTINGS

	CAP
	BLIND FLANGE
	FLANGE JOINT
	FLEXIBLE COUPLING
	FLEXIBLE HOSE
	HOSE COUPLING
	NOZZLE
	REDUCER _ CONCENTRIC
	REDUCER _ FLAT BOTTOM
	REDUCER _ FLAT TOP

SELF ACTUATED REGULATING VALVES

	GLOBE, DIAPHRAGM TYPE PRESSURE SUSTAINING VALVE
	GLOBE, DIAPHRAGM TYPE PRESSURE REGULATING VALVE
	GLOBE, DIAPHRAGM TYPE PRESSURE RELIEF VALVE
	SPRING ACTUATED PRESSURE RELIEF VALVE
	SPRING ACTUATED 90° PRESSURE RELIEF VALVE
	HOCV
	HOSV

GENERAL INSTRUMENT FUNCTIONS

	PILOT LIGHT
	PRESSURE SETTING BALLOON (RIGHT)
	PRESSURE SETTING BALLOON (LEFT)
	UNDEFINED INTERLOCK LOGIC

LEVEL SENSORS

	ULTRASONIC
	CONDUCTIVITY PROBE
	BALL FLOAT
	PUMP DRIVEN BY A VARIABLE SPEED MOTOR

PIPING HAZARDOUS CLASSIFICATION LEVELS TO AS4343

	HAZ LEVEL
	HAZ LEVEL
	HAZ LEVEL

(AVERAGE) eg. CHLORINE, CAUSTIC (LOW) eg. POLYMER, HIGH PRESSURE (NEGLIGIBLE) eg. WATER

NOTE
THIS DRAWING SHOWS THE STANDARD SYMBOLS TO BE USED WHEN PRODUCING P & ID'S FOR SA WATER AND ON ALL SA WATER PROJECTS. REFER TO TS112

ACTUATORS

	DIAPHRAGM
	DIAPHRAGM, PRESSURE BALANCED
	FLOAT
	HAND ACTUATED OR HANDWHEEL
	PISTON
	PISTON ACTUATOR WITH POSITIONER OR POSITION SWITCHES
	POSITIONER SHOWN ON ACTUATOR.
	POSITIONER TAG
	ROTARY MOTOR (MAY BE ELECTRIC HYDRAULIC or PNEUMATIC)
	SOLENOID
	SPRING - FOR PRESSURE RELIEF OR SAFETY VALVE ONLY
	WEIGHT

PRIMARY ELEMENT FLOW RATE

	FLOW ELEMENT, ORIFICE TYPE
	FLUME
	FLOW ELEMENT CODE BALLOON (To be associated with Element)
	MAGNETIC FLOWMETER
	PITOT TUBE or ANNUBAR
	POSITIVE DISPLACEMENT FLOWMETER
	THERMAL MASS FLOWMETER
	TURBINE FLOWMETER
	ULTRASONIC FLOWMETER
	VARIABLE AREA FLOW INDICATOR
	VORTEX METER
	WEIR

PIPING VALVES

	VALVE, ANGLE
	VALVE, BALL
	VALVE, BUTTERFLY
	VALVE, DIAPHRAGM
	VALVE, FIRE PLUG
	VALVE, GAS RELEASE
	VALVE, GATE
	VALVE, GENERAL
	VALVE, GLOBE
	HYDRANT
	VALVE, KNIFE GATE
	VALVE, NEEDLE
	VALVE, NON RETURN
	VALVE, BACKFLOW PREVENTION DEVICE
	PENSTOCK
	VALVE, PINCH
	VALVE, PLUG
	STOP PLATE
	STOPLOG
	VALVE, 3 WAY

REVISIONS 1 14/08/15 P.H. ISSUED FOR USE 2 11/08/15 M.L.S. REVIEWED 3 14/08/15 M.S. AUTHORIZED	DESIGNED G.J.H. 24/05/15 DRAWN C.M.C.D. 24-05-12 REVIEWED M.L.S. 11/08/15	AUTHORIZED SIGNATURE: DATE: 14/08/15 PRINT NAME: MARK STEPHENS	SA Water This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	SHEET SIZE: A1 SA PROJECT No.: - SA DOCKET No.: - CONTRACT No.: - SHEET COUNT: 1 OF 2 DRAWING NUMBER: 4003-00001-01 YEAR: - NUMBER: - SHEET: -
	CONTRACTOR/COMPANY NAME: MARK STEPHENS REVISION APPROVER (PRINT NAME): MARK STEPHENS REFERENCE:		PROCESS AND INSTRUMENTATION DIAGRAMS STANDARD DRAFTING SYMBOLS CHART SA WATER STANDARDS	
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	DO NOT SCALE PAPER PRINT		BAR CODE	