## **DETAILED PIPING SPECIFICATION**

## 1. GENERAL

## 1.1 Work Included

- .1 The piping specification sheets on the following pages detail the requirements for each type of process pipe included in the Work.
- .2 The piping materials are listed on the specification sheets.

# 1.2 Process Piping Commodity Summary

DA	Dry Air	PVC Sch80
HA	Humid Air	PVC Sch80
OA	Outside Air	PVC Sch80
SA	Soda Ash	PVC Sch80
SEA	Service Air	Aquatherm Greenpipe SDR 7.4, working pressure 200 psi (1400 kPa)

## 2. PRODUCTS

## 2.1 Schedule

- .1 Pages 2 to 4 following.
- .2 Piping located in the Sequencing Batch Reactor headspace is defined as "submerged".

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## **DETAILED PIPING SPECIFICATION**

## DA/HA/OA

GENERAL						
GLINLINAL		MAXIMUM CONDITIONS			TEST CONDITIONS	
PROCESS FLUID	SYMBOL	PRESSURE (kPa)		TEMP. (°C)	PRESSURE (kPa)	DURATION
Dry Air	DA	750		30	1000	120 minutes
Humid Air	на	750		30	1000	120 minutes
Outside Air	OA	750		30	1000	120 minutes
PIPE					1	
LOCATION	SIZE (mm)	MATERIAL		RATING	SPECIFICATIONS	REMARKS
All	10 – 200	PVC		Schedule 80	ASTM D1785, CSA 137.3	
COATINGS					1	<del></del>
LOCATION	SIZE (mm)	MATERIAL			SPECIFICATIONS	REMARKS
All	10 – 200	N/A				
l						
LININGS	1	1			1	T
LOCATION	SIZE (mm)	MATERIAL			SPECIFICATIONS	REMARKS
All	10 – 200	N/A				
JOINTS	1	1			1	1
LOCATION	SIZE (mm)	TYPE		MUM SPACING	SPECIFICATIONS	REMARKS
All	≥75	Solvent Weld	Weld N/A 12m		ASTM D2467, D2564	
	≥75	Flanges			ASTM D2467	Note 1
FITTINGS AND APPUR		I A A TERIAL		DATING	ODE OFFICATION IS	DEMARKS
ITEM	SIZE (mm)	MATERIAL		RATING	SPECIFICATIONS	REMARKS
Flanges	10 – 200	PVC		Schedule 80		
ELL - Short Radius	10 – 200	PVC		Schedule 80	ASTM D2467, Solvent Weld	
ELL - Long Radius,						
Couplings, Tees,						
Reducers,						
Reducing Outlets and						
Laterals						
Plug	10 – 200	PVC		Schedule 80	ASTM D2467, Solvent Weld	
				Blind Flange		
Сар	≥75	PVC		Schedule 80		
Flange Gaskets	1	Bl. Neoprene, V	iton		ASTM F477	Note 3
PVC Solvent	ent			ASTM D2564	Note 3	

#### NOTES

- 1. Provide Unions or flanges as shown on Drawings to allow for pipe disassembly.
- 2. Where pipe crosses a structural joint, install at the joint location an EPDM lined elastomer spherical moulded type expansion joint capable of 0.25 degrees angular movement and ±20 mm axial movement.
- 3. Gaskets and solvent material to be compatible with designated chemical solution.

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## **DETAILED PIPING SPECIFICATION**

## SA

		MAXIMUM CONDITIONS		ıs	TEST CONDITIONS	
PROCESS FLUID	SYMBOL	PRESSURE (kPa)		TEMP. (°C)	PRESSURE (kPa)	DURATION
Soda Ash	SA	750		30	1000	120 minutes
PIPE						l
LOCATION	SIZE (mm)	MATERIAL		RATING	SPECIFICATIONS	REMARKS
All	10 – 200	PVC		Schedule 80	ASTM D1785, CSA 137.3	
	•			•		
COATINGS	1	T				
LOCATION	SIZE (mm)	MATERIAL			SPECIFICATIONS	REMARKS
All	10 – 200	N/A				
LININGS						
LOCATION SIZE (mm)		MATERIAL			SPECIFICATIONS	REMARKS
All	10 – 200	N/A				-
JOINTS	T	T	1			1
LOCATION	SIZE (mm)	TYPE	MAXIMUM SPACING		SPECIFICATIONS	REMARKS
All	≥75	Solvent Weld N/A			ASTM D2467, D2564	
	≥75	Flanges 12m		ASTM D2467	Note 1	
FITTINGS AND APPUR	RTENANCES					
ITEM	SIZE (mm)	MATERIAL		RATING	SPECIFICATIONS	REMARKS
Flanges	10 – 200	PVC		Schedule 80		
ELL - Short Radius	10 – 200	PVC		Schedule 80	ASTM D2467, Solvent Weld	
ELL - Long Radius,						
Couplings, Tees,						
Reducers, Reducing Outlets and						
Laterals						
Plug				Schedule 80	ASTM D2467, Solvent Weld	
. 149	10 200	1.70		Blind Flange	TOTAL DESCRIPTION	
Cap	≥75	PVC		Schedule 80		
Flange Gaskets		Bl. Neoprene, Viton		2 32.2.2.2	ASTM F477	Note 3
Flange Gaskets		Di. Neopiene. Vi	luli		ACTIVITY I	

## NOTES

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- 3. Gaskets and solvent material to be compatible with designated chemical solution.

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# **DETAILED PIPING SPECIFICATION**

# SEA

	SYMBOL	OPERATING LIMITS		TEST CONDITIONS	
PROCESS FLUID		PRESSURE (kPa)	TEMP. (°C)	PRESSURE (kPa)	DURATION
Service Air	SEA	0-750	5-30	1400	120 minutes
PIPE/FITTINGS	•				
	SIZE (mm)	MATERIAL	RATING		
LOCATION	SIZE (IIIII)	WATERIAL	10/11110		

# **END OF SECTION**