dioxide PACIFIC

Chemical Dosing Systems

Chemical Dosing Systems

SYSTEM IDENT CODE SELECTION

Use the data sheets on pages 3-8 to select ident codes for:

- DS (Dosing Skid)
- DP (Dosing Pumps)
- DI (Dosing Components)
- DT (Dosing Tank)
- DC (Dosing Control)
- TS (Transfer Station)

Once the codes are selected, we can quickly provide a quotation. If you need assistance with selection of the codes, please contact us.

INTEGRATION AND INSTALLATION

All systems are provided with documentation for integration of the dosing system into your process: GA (General Arrangement) drawings; 3D Model; Electrical Wiring Diagram, and Operation Manual.

All systems are tested and pre-commissioned prior to delivery to ensure quick start-up without faults. Installation and commissioning can be done by your staff using the documentation provided. If you would like Dioxide Pacific to install and commission, we are happy to help.

HIGHEST QUALITY COMPONENTS

Dioxide Pacific use high quality, industrial grade components for lowest life cycle cost.

MAINTENANCE AND SPARE PARTS

All systems are provided with a comprehensive spare parts list and Dioxide Pacific maintains a large spare parts inventory.

Dosing Skid

DS	**Dosing Skid**						
	Pumps						
	1	Duty					
	2	Duty/Standby					
	3	Duty/Duty/Standby					
		Flowrate					
		15	0-20 L/hr (0 – 5 GPH)				
		20	20-200 L/hr (5 – 50 GPH)				
		25	200-500 L/hr (50 – 125 GPH)				
		40	500-1000 L/hr (125 – 250 GPH)				
			Pipework material				
			U	uPVC Sch 80			
			C	cPVC Sch 80			
			P	PVDF			
			E	ECTFE			
			F	Carbon steel, PFA lined			
				Elastomer			
				E	EPDM		
				F	FPM/FKM		
				P	PTFE		
					Mounting		
					HB	HDPE backboard	
					HC	HDPE cabinet	
					FF	Fiberstrut frame	
					SF	SS frame	
					SC	SS cabinet	
						Splash protection	
						0	No splash protection – mounted directly on backboard
						1	Localised splash protection for pumps only
						2	Removable splash protection
						3	Hinged splash protection (doors)
							Leak detection
							0	No leak detection
							1	Leak detection switch in sump – HC model only
							2	Leak detection switch in additional trip tray
DS	**2**	**15**	**U**	**F**	**HC**	**2**	**0**

Dosing Pumps

DP	Dosing pumps
	Manufacturer
P	Prominent
G	Grundfos
M	Milton Roy
F	Free Issue
O	Other
	Type
D	Diaphragm
P	Peristaltic
O	Other
	Flowrate
__	Specify max flowrate in L/hr or GPH
	Pressure
__	Specify max pressure in bar or psi
	Elastomer
E	EPDM
F	FPM/FKM
P	PTFE
	Liquid end material
PV	PVDF
PC	PVC
PP	PP
TT	PTFE
SS	Stainless Steel
	Inputs
0	Manual run
1	As 0 + Pulse input
2	As 1 + 4-20mA input
	Outputs
0	No outputs
1	Fault relay
2	As 1 + 4-20mA calculated flow output
3	As 1 + 2
	Diaphragm rupture output
0	No output or not applicable
1	Diaphragm rupture output
	Degassing solenoid
0	No solenoid
1	Solenoid 24VDC

DP	P	D	__	__	F	PV	2	1	1	0

Dosing Components

DI	Dosing components
	Calibration cylinder
0	No calibration cylinder
1	Calibration cylinder sized for 1.5 min of drop test
	Pressure gauge with gauge guard
G0	No gauge
G1	Common gauge
G2	Gauge per pump
	Pressure load
L0	No pressure load valve
L1	Common pressure load valve
L2	Pressure load valve per pump
	Pressure relief
P0	No pressure relief valve
P1	Common pressure relief valve
P2	Pressure relief valve per pump
	Pulsation dampener
0	No pulsation dampener
1	Common pulsation dampener
2	Pulsation dampener per pump
	Flow switch on pressure relief
0	No flow switch
1	Flow switch on each pressure relief
	Flow Monitoring
0	No flow monitoring
1	Common flow monitoring
2	Flow monitoring per pump
	Flow Monitoring Type
0	None
1	Magnetic flow meter
2	Flow switch
3	Flow meter pulse output
	Flush Points
0	No flushing points
1	Flushing points on pumps
2	As 1 + flushing points on skid
	Carrier/Dilution Water
0	No carrier/dilution water
1	Carrier water line on skid
2	As 1 + rotameter and diaphragm valve
3	As 2 + solenoid with bypass
4	As 2 + low flow switch
5	As 3 + low flow switch
6	As 1 + Option 5 mounted in external cabinet
	Strainer
0	No strainer
1	1 x strainer
2	2 x strainer

DI	1	G1	L1	P1	1	10	0	1	2	5	1	

Dosing Tank

DT	Dosing tank										
		Volume									
		__	Specify nominal volume in L or GAL								
			Material								
			M0	HDPE							
			M1	HDPE double skinned							
			M2	Rotomoulded MDPE							
			M3	Fiberglass							
			M4	Steel							
			M5	Stainless Steel							
			M6	IBC/Tote							
			M7	IBC/Tote with spill pallet							
			M8	IBC/Tote with fiberglass bund							
			M9	IBC/Tote with HDPE bund							
				Colour							
				B	Black						
				N	Natural (opaque)						
				W	White						
				P	Painted						
					Visual level indication						
					NVI	No level indication (opaque tanks visual possible)					
					STO	Site gauge					
					STI	Site gauge with isolation					
					MLI	Magnetic level indicator					
						Discrete level measurement (capacitive measurement)					
						L0	No discrete level measurement				
						L1	1 x switch: low level				
						L2	2 x switch: low and high level				
						L3	3 x switch: low low, low and high level				
						L4	3 x switch: low, high and high high level				
						L5	4 x switch: low low, low, high and high high level				
							Continuous level measurement				
							C0	No continuous level measurement			
							C1	4-20mA from tank mounted ultrasonic			
							C2	4-20mA from standpipe mounted ultrasonic			
							C3	4-20mA from magnetic level indicator			
							C4	4-20mA from pressure transducer (gauge guard mounted)			
								Inlet and overflow sizing			
								00	Not applicable		
								15	0.5” inlet, 1” overflow		
								25	1” inlet, 1.5” overflow		
								40	1.5” inlet, 3” overflow		
								50	2” inlet, 3” overflow		
									Outlet valve sizing		
									15	0.5” outlet	
									25	1” outlet	
									40	1.5” outlet	
									50	2” outlet	
										Weight Cells	
										0	No weight cell
										1	Weight cell
											Actuated valve
											0 No actuated valves
											1 Actuated valve on tank outlet
DT	__	**M0**	**B**	**STI**	**L4**	**C2**	**25**	**25**	**0**	**1**	

Last Modified: 25 March 2015

Dosing Control

DC	Dosing Control							
	Enclosure							
	T	Thermoplastic IP66						
	S	Stainless steel 316, IP65						
	F	FRP IP66						
	S	Powder coated steel, IP56						
		PLC						
		MIC	Allen Bradley MicroLogix 1400					
		CON	Allen Bradley ControlLogix 1756					
		COM	Allen Bradley CompactLogix 1769					
		PAN	Panasonic FPX					
		SCH	Schneider M340					
		SIE	Siemens S7-300					
		KO6	Koyo DL06					
		K45	Koyo 450					
			HMI					
			0	No HMI – lights and switches only				
			1	Red Lion G308 7.5 inch TFT colour				
			2	Allen Bradley Panelview Plus 700 - 6.5 inch TFT colour				
			3	Allen Bradley Panelview Plus 1250 - 12 inch TFT colour				
			4	Schneider XBTGT 12 inch TFT colour				
			5	Uticor UT3-10TC 10 inch TFT colour				
				Form				
				1F	Form 1			
				2A	Form 2a			
				2B	Form 2b			
				3A	Form 3a			
				3B	Form 3b			
					LV/ELV Separation			
					00	Not applicable		
					AV	All voltages in one panel (24VDC, 220-240VAC, 415-480VAC)		
					SV	LV and ELV separate panels (24VDC separate to 220-480VAC)		
						Mounting		
						0	Wall mount	
						1	Floor mount	
							Entry	
							0	Bottom cable entry
							1	Side cable entry
							2	Top cable entry

DC	**F**	**CON**	**1**	**1F**	**AV**	**0**	**0**	

Transfer Station

TS	Transfer Station				
		Tank feeds			
	1	1 tank fed			
	2	2 tanks fed			
	3	3 tanks fed			
			Isolation valves on feeds		
		M	Manual		
		A	Actuated		
				Tank level indication	
			1	Display of level switches	
			2	Display of tank volumes	
			3	1 + 2	
					Transfer power supply
				SF	1 phase, 240VAC plug with isolator
				TF	3 phase, 415VAC plug with isolator
				DF	SF + TF
				AD	Solenoid for air driven transfer
TS	**1**	**M0**	**1**	**TF**	

Features and Benefits

FEATURE	BENEFIT	WHAT THIS MEANS FOR YOU
All systems manufactured by Dioxide Pacific personnel with more than 20 years' experience in chemical dosing systems	High quality manufacture produces long term reliability and low probability of failure	Lowest lifetime cost of ownership and minimum downtime over equipment life
3D CAD used to model all systems	Systems are consistent so you can confidently use the data we provide to integrate into your plant	When you receive the plant, it will be exactly the same as the 3D model we provide at time of order. No surprises
High quality, commonly used components	Probability of component failure is low, spare parts and replacement are available worldwide	You won't be stuck waiting for replacement parts with the system offline
Duty/standby operation based on time and fault	If the duty dosing pump goes into fault, swap over occurs automatically to the standby dosing pump. Duty and standby dosing pumps will swap on an adjustable time basis if no faults present.	You will always have continuity of dosing. If dosing of the chemical is critical then this duty/standby option should be selected.
Duty/duty/standby operation based on time and fault. In this case, you have two separate dosing points with one common standby pump.	If either duty dosing pump goes into fault, swap over occurs automatically to the standby dosing pump. Duty and standby dosing pumps will swap on an adjustable time basis if no faults present.	You will always have continuity of dosing. If dosing of the chemical is critical then this duty/standby option should be selected.
Choice of pipe materials to suit the chemical. UPVC, CPVC, PVDF or Carbon Steel – PFA Lined.	These common materials will suit most chemicals and the correct materials will be selected to suit your chemical	You can have full confidence in the chemical resistance of the pipe materials
Choice of seal materials to suit the chemical. EPDM, FKM (Viton), PTFE	These common materials will suit most chemicals and the correct materials will be selected to suit your chemical	You can have full confidence in the chemical resistance of the seal materials
Safety is a high priority in design. You can choose to have the dosing equipment mounted in a HDPE or SS cabinet with splash protection	All the equipment in contact with chemical is fully enclosed. If a leak occurs, it will be contained and will not come into contact with the operator	You can safely work around and maintain the equipment without fear of chemical splashes

FEATURE	BENEFIT	WHAT THIS MEANS FOR YOU
Major reputable brands of dosing pump can be used on our systems	If you have a preference for a particular brand we can accommodate it	You can minimize spare parts kept at your site and you will be familiar with the dosing pump you have selected
Dosing skids can be customized with only the components you need for your application e.g. for long dosing lines and smooth flow a pulsation dampener can be selected	No need to pay for unnecessary features that never get used.	Your capital (purchase) cost is kept as low as possible while still maintaining highest quality and system integrity
Bulk chemical storage can be perfectly integrated with the chemical dosing system by your choice of the tank and tank options	Single source supply for chemical tank, instrumentation and dosing system keeps the responsibility for performance with Dioxide Pacific.	Your plant will fit together like a glove and work seamlessly as all components including tank, instrumentation and dosing equipment are designed to work together
The TS Transfer Station is a HDPE cabinet with inlet manifold suited to the chemical. Controls for start/stop and run/fault for transfer pump and level switch display optional	Bulk chemical transfer using the Dioxide Pacific TS transfer station makes power supply and chemical transfer from tanker to tank easy	Your safety is maintained during transfer of chemical from tanker to bulk tank
The dosing system can be supplied with an electrical control panel which operates all of the electrical devices, monitors instrumentation inputs and is remotely accessible via the internet	The dosing plant comes to you fully assembled, wired and tested including all of the plant logic operated by PLC and HMI. You don't need to do any customization or fault finding on site	Having the ability to control the system easily from one HMI location, including manual operation of individual items for testing or calibration is provided to make your life easier. Remote internet access with email alarms, allows for simple and quick troubleshooting without the need for a site visit – reducing your service costs.

www.dioxide.com

Sydney (NSW)
P: + 61 2 9999 4594
F: +61 2 9999 4534

PO Box 791 Narrabeen
NSW 2101 Australia

E: sales@dioxide.com

Perth (WA)
P: + 61 8 9337 5415
F: +61 2 9999 4534

E: saleswa@dioxide.com

Melbourne (VIC)
P: + 61 3 9005 1681
F: +61 2 9999 4534

E: salesvic@dioxide.com

United States
P: 702-938-6418
F: 702-938-4118

Suite B-562 / 2654 W Horizon Ridge Pkwy
Henderson NV 89052-2803

E: salesus@dioxide.com