

aslan

TECHNOLOGIES

DRY POLYMER SYSTEMS OVERVIEW

Dual Function Continuous DFC Series



DFC1000

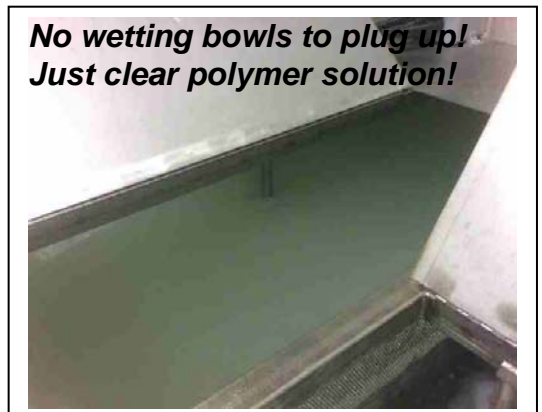


DFC4200

**Turnkey Product Solutions Include
Makedown system + Bulk Bag
Frame + Transfer Pump in One
Footprint!**

- **One makedown system for both BULK DRY and NEAT LIQUID Polymer solution preparation**
- **Rugged stainless steel tank construction for long-lasting, reliable operation**
- **Robust, Simple and Versatile**
- **PEO, Cationic, Anionic all with the same system**
- **Variable speed mixer options versatility**

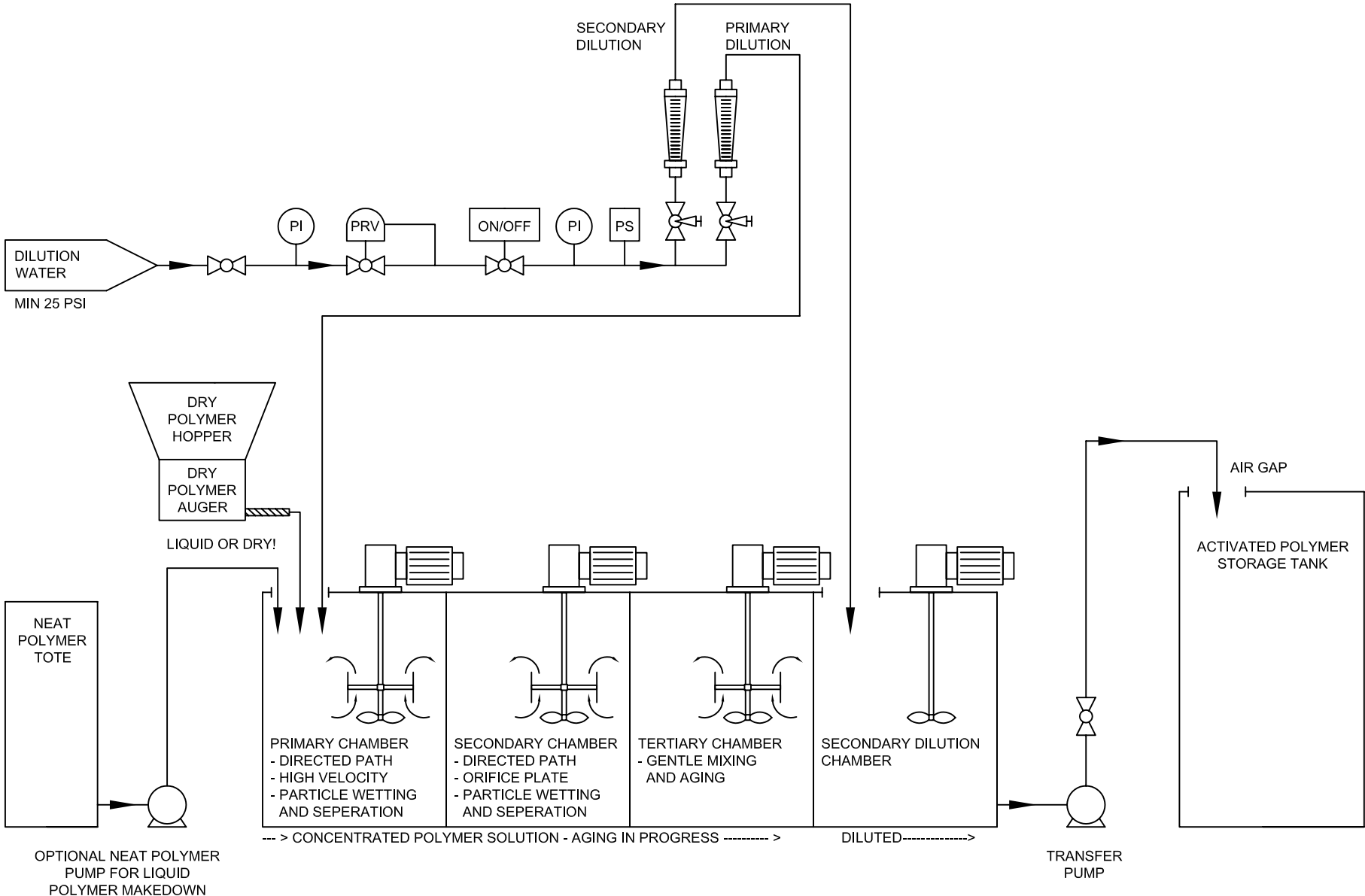
**No wetting bowls to plug up!
Just clear polymer solution!**



ASLAN TECHNOLOGIES INC

DUAL FUNCTION CONTINUOUS POLYMER MAKEDOWN SYSTEM

SIMPLIFIED PROCESS FLOW DIAGRAM





DFC Series Overview – Model Numbers Comparison

ASLAN TECHNOLOGIES INC						
DFC SERIES DRY POLYMER MAKEDOWN SYSTEM						
MODEL NUMBER TABLE						
MODEL	DFC 1200E	DFC 1800E	DFC 2000	DFC 3000	DFC 4000	DFC 5000
DRY FEED CAPACITY	POUNDS PER DAY (lbs/day)					
Maximum Feed Rate in Ideal Conditions	1200	1800	2000	3000	4000	5000
TYPICAL - At ~30minutes of age time	1096	1661	1661	2658	3654	4651
TYPICAL - At ~45 minutes of age time	731	1107	1107	1772	2436	3101
LONG - At ~60 minutes of age time	548	831	831	1329	1827	2326
CONCENTRATION	MAXIMUM GALLONS PER MINUTE (GPM) AT 30 MINUTES AGE TIME					
0.10%	90	140	140	220	CONTACT FACTORY	
0.25%	37	55	55	89	122	155
0.50%	18	28	28	44	61	78
1.00%	9	14	14	22	30	39

SPECIFICATIONS

MODEL	DFC1200E	DFC1800E	DFC2000	DFC3000	DFC4000	DFC5000
DRY FEED CAPACITY	POUNDS PER DAY (lbs/day)					
Maximum Feed Rate in Ideal Conditions	1200	1800	2000	3000	4000	5000
TYPICAL - At ~30minutes of age time	1096	1661	1661	2658	3654	4651
TYPICAL - At ~45 minutes of age time	731	1107	1107	1772	2436	3101
LONG - At ~60 minutes of age time	548	831	831	1329	1827	2326
MAXIMUM POLYMER SOLUTION FLOW RATE CAPACITY @ CONCENTRATION	GALLONS PER MINUTE (GPM) AT 30 MINUTES AGE TIME					
0.10%	90	140	140	220	contact factory	
0.25%	37	55	55	89	122	155
0.50%	18	28	28	44	61	78
1.00%	9	14	14	22	30	39

UTILITIES

WATER FLOW RATE	GALLONS PER MINUTE (gpm) AT 30 MINUTES AGE TIME					
0.10%	90	140	140	220	contact factory	
0.25%	37	55	55	89	122	155
0.50%	18	28	28	44	61	78
1.00%	9	14	14	22	30	39
ELECTRICAL SUPPLY	FULL LOAD AMPS AT VOLTAGE					
Standard 208-230 VAC / 3 PHASE / 60 HZ	na	15	20	25	30	35
120 VAC / 1 PHASE / 60 HZ	5ea x 11	not available				
600, 480 VAC / 3 PHASE / 60 HZ	on request					
415, 380 VAC / 3 PHASE / 50 HZ	on request					
INSTRUMENT AIR SUPPLY	SCFM MAX (AVG HOUR) @ 70PSI MIN					
SCFM	<0.1					
MILL AIR SUPPLY	TYPICAL (AVG HOUR) @ 30-50 PSI AIR SUPPLY					
WITH OPTIONAL VARIABLE SPEED ELECTRIC PUMP	0					
WITH OPTIONAL AIR OPERATED TRANSFER PUMP - SCFM	10 TO 50	15 TO 60	20 TO 70	30 TO 80	50 TO 100+	50 TO 100+
TYPICAL AIR PUMP SIZE - CONNECTION	1"	1.5"		2"		3"
TYPICAL AIR PUMP - MAXIMUM GPM	37	55	55	89	122	155

CONNECTIONS

WATER SUPPLY	1" NPTF	1 - 1/2" NPTF	2" NPTF	2" NPTF	
POLYMER SOLUTION DISCHARGE NEAT POLYMER INJECTION PORT				3" ANSI RFF	
(ONLY WITH OPTIONAL AIR TRANSFER PUMP) MILL AIR SUPPLY	1/2" NPTF	3/4" NPTF	1" NPTF		
INSTRUMENT AIR SUPPLY	1/2" NPTF				

SPACE CONSIDERATIONS

SPACE REQUIREMENTS	FEET MINIMUM					
FREE FLOOR SPACE	7 X 10	8 X 16				
EQUIPMENT SIZE	4 X 4	5 X 10				
OVERHEAD CLEARANCE TO LOAD HOPPER - WITHOUT BULK BAG	7 TO 8	8 TO 9	8 TO 9	9 TO 10	10 TO 11	11 TO 12
OVERHEAD CLEARANCE TO LOAD HOPPER - WITH BULK BAG FRAME	NOT AVAILABLE		11 TO 12	12 TO 13	13 TO 14	14 TO 15

STRUCTURAL LOADING CONSIDERATIONS

INSTALLED OPERATING WEIGHT (FULL HOPPER AND TANK) - LBS	3500	5500	6500	9500	11500	13500
ADDITIONAL LOAD FOR BAG FRAME WITH FULL BULK BAG - LBS	N/A		4000	4000	4000	4000

EQUIPMENT

BULK BAG FRAME							
FRAME MATERIAL	PLAIN CARBON STEEL, DARK BLUE ENAMEL PAINTED						
MAXIMUM BAG WEIGHT - LBS	NOT AVAILABLE						
MAXIMUM BAG DIMENSIONS - (L X W X H INCHES)	2000 48 X 48 X 60"						
HOPPER EQUIPMENT							
HOPPER MATERIAL	304 STAINLESS STEEL						
OPERATION CAPACITY - CUBIC FEET	2	2	5				
UPPER IRIS VALVE - BULK BAG SHUTOFF - 8"	N/A			OPTIONAL	8" IRIS VALVE STD		
LOWER SLIDE GATE VALVE - HOPPER SHUTOFF - 12"				OPTIONAL	12" SLIDE GATE VALVE STD		
LEVEL SENSOR AND LOW HOPPER INDICATING BEACON	N/A	NO	STD				
VARIABLE AREA FLOWMETERS - (STANDARD)	GALLONS PER MINUTE RANGE						
PRIMARY DILUTION	0.6-6.6	13.-13.3	2.6-26	4.4-44	4.4-44	11-110	
SECONDARY DILUTION	1.3-13.3		4.4-44		11-110		
MIXING EQUIPMENT							
QTY MIXERS	3			4			
MIXER M1 AND M2 - (HP- DIA X PITCH)	3/4 - 8 X 12	3/4 - 12 X 12	3/4 - 12 X 12		1 - 12 X 18		
MIXER M3 - (HP - DIA X PITCH)	1/2 - 8 X 8	N/A					
MIXER M4 - (HP - DIA X PITCH)							
PROPELLER TYPE	MARINE 3 BLADE						
PROPELLER MATERIAL	316 STAINLESS STEEL						
SHAFTING MATERIAL	304 STAINLESS STEEL						
TANK WALL CONSTRUCTION	304 STAINLESS STEEL						
OPTIONAL UPGRADED - TANK WALL CONSTRUCTION	316 STAINLESS STEEL						
SYSTEM FRAME MATERIAL	304 STAINLESS STEEL						
RIGID BASE FRAME MATERIAL	NO BASE			PAINTED CARBON STEEL			
OVERALL TANK HEIGHT (H")	48	24	36	48	60		
OVERALL TANK DIMENSION (L" X W")	48 X 36		96 X 60				
TOTAL FULL VOLUME - LITERS (GALLONS)	1245 (329)	1887 (499)	3020 (798)	4152 (1097)	5285 (1396)		
VOLUME - CONCENTRATED MIXING AGING TANKS - LITERS (GALLONS)	1038 (274)	1572 (416)	2516 (665)	3460 (914)	4404 (1164)		

SHIPPING

WEIGHT - LBS	2000	3000	4000	4500	5000	5500						
MAX HEIGHT - INCHES	76	76	81	86	98	110						
MAX WIDTH - INCHES	50											
MAX LENGTH - INCHES	55											
BULK BAG FRAME ADDITIONAL WEIGHT - LBS	N/A											
BULK BAG FRAME - BASE (LXWXH)							2000					
BULK BAG FRAME - UPPER FRAME ASSY (LXWXH)							80 X 80 X 72 80 X 80 X 80					

PROCESS DESCRIPTION

The ASLAN TECHNOLOGIES DFC Dual Function Continuous Polymer Makedown systems is the complete answer to dry polymer makedown with neat liquid feed backup.

DFC stands for: Dual Function Continuous Dual Function:

1. Dry Polymer Makedown
2. Liquid Polymer Makedown

All DFC models include two key features to facilitate liquid backup to the dry auger.

1. Injection point for liquid polymer quill in the primary mixing chamber
2. Switched 120 VAC standard receptacle to facilitate control of a typical small liquid polymer metering pump in case of an auger failure. This can be used alternatively to feed a small dose of biocide where required.

A completely aged and activated solution can be prepared with either a DRY or NEAT LIQUID polymer source. The system is designed to run unattended between bulk fillings of the hopper.

The aging and mixin process operates with a medium to high concentration of polymer. This results in a floor space savings since less water is stored within the aging and mixing chambers. Dilution water is not added until the final stage of mixing just before transferring the aged and diluted solution to the day tank. This better utilizes the equipment for mixing and aging polymer solution instead of mixing and storing water.

The process starts by metering a precise amount of powdered DRY or NEAT liquid product into the high velocity water layer of the primary wetting stage to promote separation and dispersion of the individual polymer flakes for hydration. The solution of water and polymer flakes is then positively circulated through directed pathways and orifice plates using powerful high flow low shear mixers. This is repeated in at least 3 and up to 4 mixing chambers depending on the size of system.

Screens placed between latter chambers ensure that no gels which are in the process of hydration are allowed to pass. In this manner, the polymer solution can be monitored at a glance by an operator. The operator can visually observe the performance of the equipment. It is visually clear to the operator at the first stage that the polymer flakes are dispersed and separated and the hydration of individual flakes is taking place. As the solution passes through each chamber, the operator can positively identify that the solution is increasing in viscosity, becoming completely transparent and gel free as it approaches complete activation.

The use of powerful low-shear mixers allows complete dissolution and hydration to achieve maximum product activation without damage to the polymer chains.

As the solution progresses through the chambers, the mixing velocity continually decreases as the aged solution approaches the last chamber. The integrity of the polymer chains are preserved even with low charge and PEO (Polyethylene oxide) polymers where extreme shear sensitivity must be exercised.

In shear sensitive products, variable speed mixers are supplied allowing extreme flexibility in energy input to suit particular polymer products.

In the last chamber, secondary dilution water is added and allowed to mix prior to transfer to a solution storage day tank.

The system is complete with hopper, volumetric feeder, aging/mixing chambers and mixers, primary and secondary water flowmeters, control valves and level control. Instrumentation such as MAG or MASS flowmeters can be added to suit customer specifications.

Contact your ASLAN TECHNOLOGIES INC. representative for further information on the operational parameters such as concentration limitations and product compatibility.

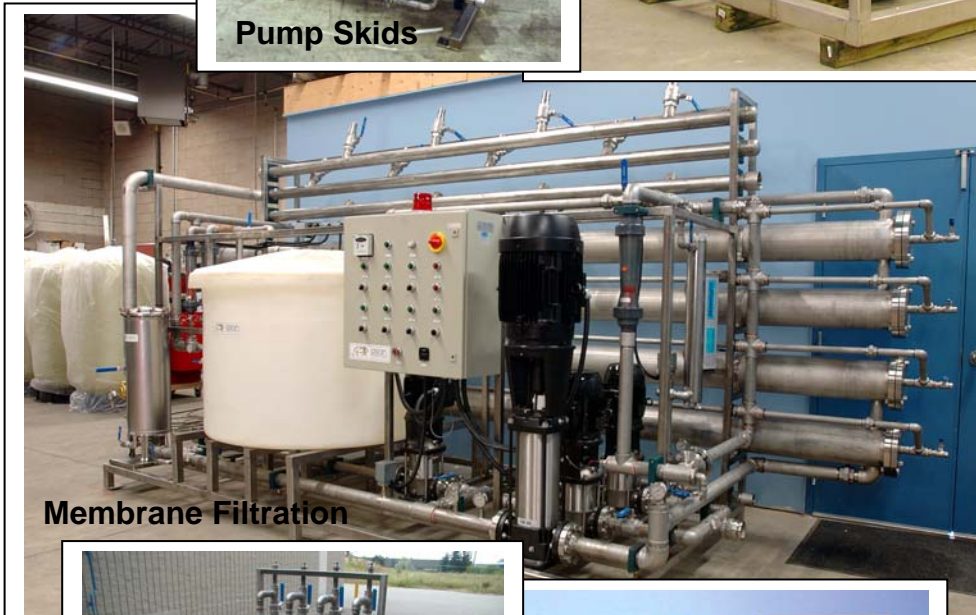
Other Products by: **ASLAN**



Pump Skids



Water Treatment



Membrane Filtration



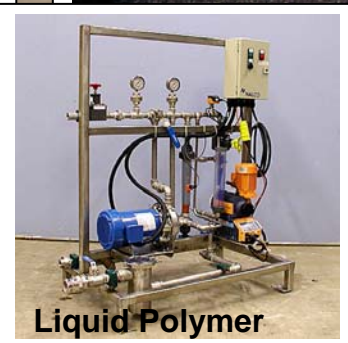
Electrical & SCADA



Standard Filtration



Analyzer Skids



Liquid Polymer

Distributed by:



5044 South Service Road, Burlington, Ontario, Canada L7L 5Y7

Phone 905-632-4968

Fax 905 632-6730

Email Sales@aslantech.ca