



Desmet Tag WEP Tag
P622.1/1 19-P-762A
P622.1/2 19-P-762B
P622.2/1 19-P-862A
P622.2/2 19-P-862B

Contact: Charles Marionneaux

Address: Canton, GA

Phone: 678-880-6366

Scope of Supply

Customer: DESMET PROCESS & TECHNOLOGY Pump / Stages: 4M223 / 1
Cust / Proj Ref: WORPAR Based on curve no.: ER4195
Item number: ~~P622.1 / P622.2~~ FLS # / Reference: 1989206898 / CHS-CAM-19094
Service: Bleacher Filter Feed Date: Jul 29, 2021

Qty	Description		
2	4M223 FPD - HCl M Hard Metal Slurry ----- SCOPE OF SUPPLY ----- ----- MATERIAL MODIFICATIONS ----- Standard High Chrome Iron 28% Casing Standard High Chrome Iron 28% Impeller High Chrome Iron - Wearplate CHT 360 - Spacer Included High Chrome Iron Seal Housing • Aluminum Mesh Stuffing Box Guard 316SS Shaft Solid Shaft (No Sleeve Required) ----- MECHANICAL MODIFICATIONS ----- Non-Witness Static Impeller Balance - G16 Flowserve Bearing Gard Bearing Isolators Oil Lubricated • Bullseye Oil Level Indicator Included ----- MECHANICAL SEALS & PACKING ----- Double Mechanical Seal • Flowserve Type SLM 6200 • Silicon/Silicon, Aflas, Duplex Inboard, 316SS Outboard (DZAZ/DZAZ) ----- SEALING FLUSH SYSTEMS ----- ANSI Plan 53A 3 Gallon 316 SS Reservoir 1/2 inch 316 SS Vent and Drain Valves Tubular Level Gauge 0 - 160 PSI Pressure Transmitter Fisher Rosemont 0 - 800 PSI Range Level Switch Magnetrol Ultrasonic Stand Painted Carbon Steel ----- COUPLINGS ----- Pump Coupling: • Falk T31 Spacer Coupling (pump) [1080T31] ----- GUARDS ----- OSHA Non-Metallic (Safety Orange) Guard for pump coupling ----- BASEPLATE -----		

Feature quantities match pump quantity unless otherwise noted.

Proposal is valid for 60 days.

Customer:	DESMET PROCESS & TECHNOLOGY	Pump / Stages:	4M223 / 1
Cust / Proj Ref:	WORPAR	Based on curve no.:	ER4195
Item number:	P622.1 / P622.2	FLS # / Reference:	1989206898 / CHS-CAM-19094
Service:	Bleacher Filter Feed	Date:	Jul 29, 2021

Qty	Description		
1	Direct Drive Pump and Motor Arrangement Covered Steel Baseplate • Flowserve Supplied Standard Shims Earthing Connections 2 each per baseplate diagonally opposite Underside of baseplate prepared for grout ----- QUALITY ASSURANCE ----- Material Certification, Casing Material Certification, Impeller Material Certification, Stuffing Box Material Certification, Wearplate Material Certification, Shaft ----- HYDROSTATIC TESTING ----- Std FLS Hydrotest, Non-Witnessed (with Certificate) ----- PERFORMANCE TESTING ----- Performance Test, Non-Witnessed • Test w/ Lab Motor Performance test at rated operating speed. Vibration Test 7 points along curve (non-witnessed) Mechanical Run Test (up to 1 hour non-witnessed) ----- PAINTING & SURFACE PREPARATIONS ----- Epoxy Primer and Epoxy Topcoat <i>SSPS-SP10</i> <i>Flowserve choice of coating manufacturer / epoxy coating type.</i> ----- COMMERCIAL OPTIONS ----- Flowserve Standard Warranty ----- DOCUMENTATION ----- Submittal Package Required • For Information Only • Electronic Document Submittal • Flowserve Standard Format Flowserve Detailed Doc. Package + General Arrangement Drawing, Certified + Bill of Material (BOM) + Standard Installation & Operation Manual, PDF + Material Certificates (Selected Components Only) + Impeller Balance Report + Pump Sectional Drawing w/ Pump Bill of Material + Nameplate Drawing / Data + Pump Performance Test Report & Curve + Performance Test Procedure + Hydrostatic Test Certificate + Inspection & Test Plan + Hydrostatic Test Procedure	Desmet Tag P622.1/1 P622.1/2 P622.2/1 P622.2/2	WEP Tag 19-P-762A 19-P-762B 19-P-862A 19-P-862B

Feature quantities match pump quantity unless otherwise noted.

Proposal is valid for 60 days.

Customer:	DESMET PROCESS & TECHNOLOGY	Pump / Stages:	4M223 / 1
Cust / Proj Ref:	WORPAR	Based on curve no.:	ER4195
Item number:	P622.1 / P622.2	FLS # / Reference:	1989206898 / CHS-CAM-19094
Service:	Bleacher Filter Feed	Date:	Jul 29, 2021

Qty	Description		
	+ Paint Procedure + NDE Procedures (for applicable testing selected in Affinity) + Preservation, Packing, and Shipping Procedures + Long Term Storage Procedure + Mechanical Seal Sectional Drawing + Flanged Coupling Drawing + Seal Flush Piping Drawing + Driver Outline Drawing + Driver Wiring/Connection Drawing + Driver Typical Performance Data + Driver Installation & Operation Manual ----- PACKAGING ----- Standard Domestic Boxing ----- INCO & FREIGHT TERMS ----- FCA Factory		
2	Driver ----- MOTORS ----- Flowserve Supplied Driver Inverter Duty Motor (Variable Frequency Drive) <i>100 HP 1800 RPM 405T</i> <i>WEG</i> <i>IEEE-841</i> <i>Div. 2, Class 1, Gps. A,B,C&D, T3</i> <i>3/60/460</i> <i>No Space Heater</i> <i>Next Larger Conduit Box</i> <i>INPRO Seals</i> <i>Grounding Lug</i> <i>Grease Fittings</i> <i>Routine Test (IEEE841)</i> <i>Thermistors One Per Phase</i> <i>Nameplate Inverter Duty</i> FLS Supplied and Mounted Motor	Desmet Tag P622.1/1 P622.1/2 P622.2/1 P622.2/2	WEP Tag 19-P-762A 19-P-762B 19-P-862A 19-P-862B

Customer Comments

Shipment (after receipt of order and full release to manufacture) is 42 working weeks.

Feature quantities match pump quantity unless otherwise noted.

Proposal is valid for 60 days.

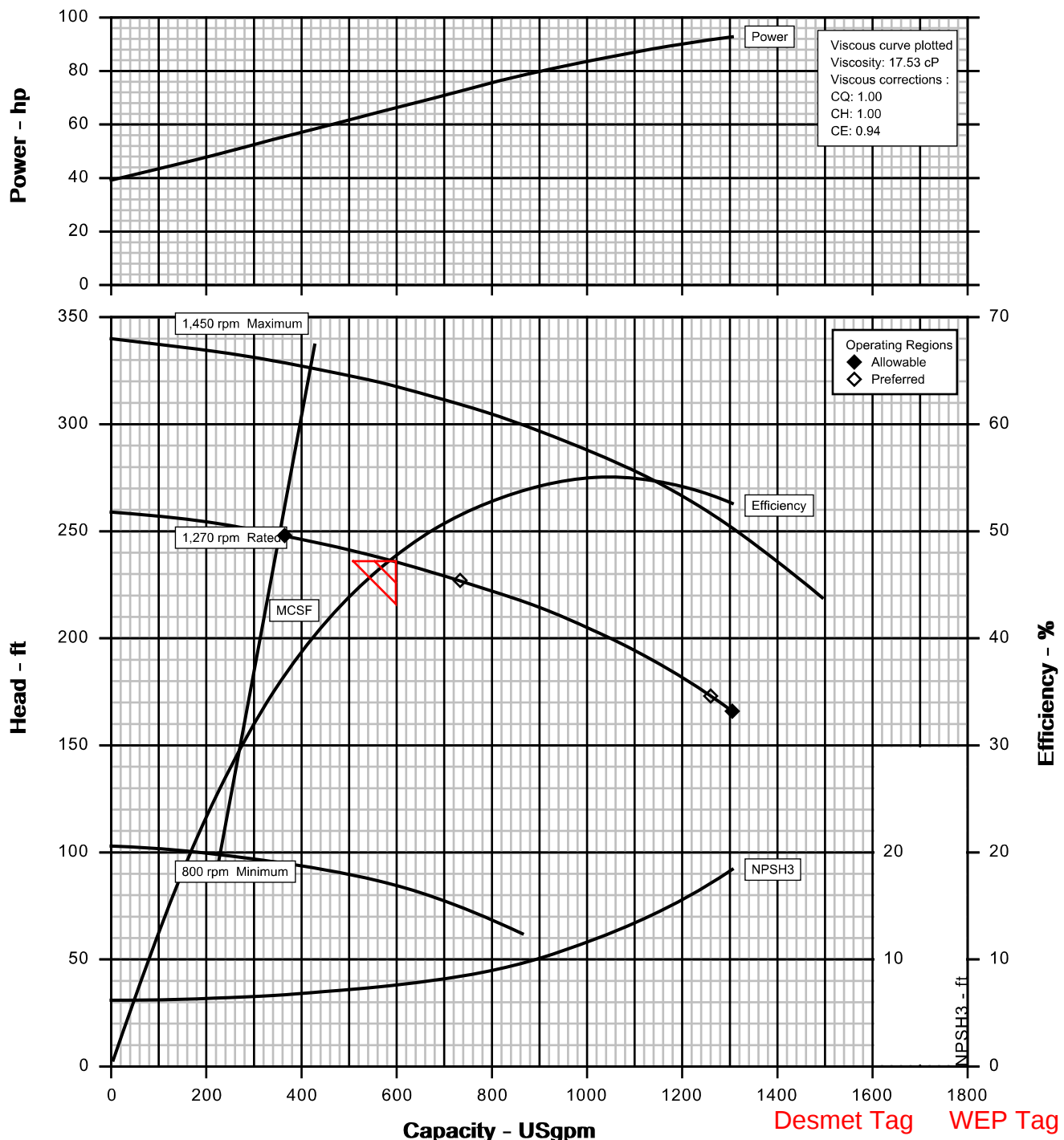


Pump size & type / Stages : 4M223 / 1
Based on curve no. : ER4195
Impeller diameter : 21.25 in

Customer : DESMET PROCESS & TECHNOLOGY ...
Item number : P622.1 / P622.2
Service : Bleacher Filter Feed
Flowserve reference : 1989206898
Date : July 29, 2021

Capacity : 596.4 USgpm
Head : 236.00 ft
Density / Specific gravity : - / 0.890
Pump speed : 1,270 rpm
Ns / Nss : - / -
Test tolerance : ANSI/HI 14.6 Grade 1B

CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS; CAPACITY, HEAD, AND EFFICIENCY.



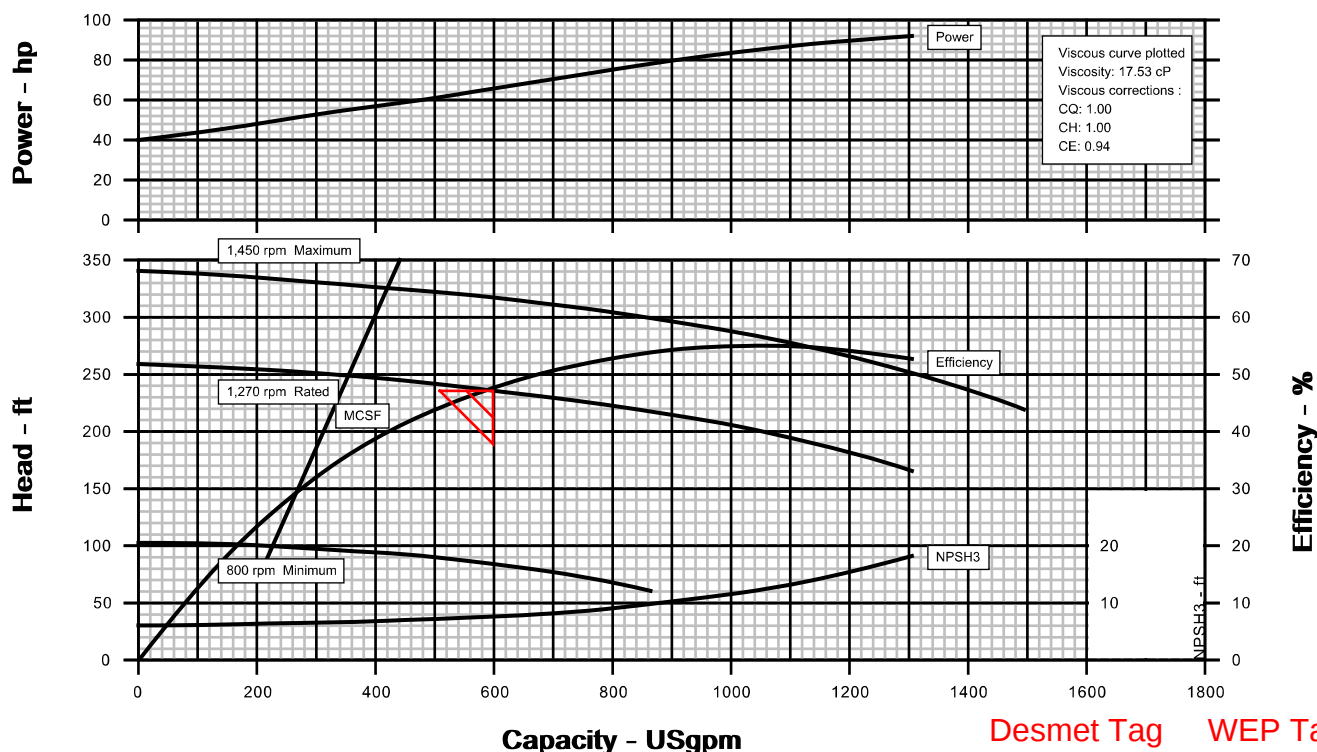
Desmet Tag WEP Tag
P622.1/1 19-P-762A
P622.1/2 19-P-762B
P622.2/1 19-P-862A
P622.2/2 19-P-862B

Customer	: DESMET PROCESS & TECHNOLO...	Pump / Stages	: 4M223 / 1
Customer reference	: WORPAR	Based on curve no.	: ER4195
Item number	: P622.1 / P622.2	Flowserve reference	: 1989206898
Service	: Bleacher Filter Feed	Date	: July 29, 2021

Operating Conditions	Materials / Specification
Capacity : 596.4 USgpm	Material column code : HCI
Water capacity (CQ=1.00) : 598.8 USgpm	Pump specification : Centrifugal S
Normal capacity : -	Other Requirements
Total developed head : 236.00 ft	Hydraulic selection : No specification
Water head (CH=1.00) : 236.61 ft	Construction : No specification
NPSH available (NPSHa) : 9.3 ft	Test tolerance : ANSI/HI 14.6 Grade 1B
NPSHa less NPSH margin : -	Reduced speed application
Maximum suction pressure : 0.0 psig	Variable Speed - Maximize Efficiency
Liquid	Driver Sizing : Rated Power
Liquid type : Other	Seal configuration : Double Mechanical Seal
Temperature / Specific gravity : 149 °F / 0.890	
Solid Size - Actual / Limit : - / 0.7000 in	
Viscosity / Vapor pressure : 17.53 cP / -	

Performance
Hydraulic power : 31.6 hp
Imp dia (fixed) : 21.25 in
Pump overall efficiency (CE=0.94) : 47.9 %
NPSH required (NPSH3) : 7.5 ft
Rated brake power : 66.1 hp
Maximum brake power : 92.5 hp
Driver power rating : 100 hp / 74.6 kW
Casing working pressure : 99.9 psig
(based on shut off @ cut dia/rated SG)
Maximum allowable : 150.0 psig
Hydrostatic test pressure : 225.0 psig
Estimated rated seal chamber pressure : -
Pump speed
Rated : 1,270 rpm
Maximum : 1,450 rpm
Minimum : 800 rpm
Minimum continuous flow : 366.7 USgpm
Maximum head @ rated speed : 259.16 ft
Flow at BEP : 1,050.7 USgpm
Flow as % of BEP : 56.8 %
Efficiency at normal flow : -
Head rise to shut off : 9.8 %
Impeller tip speed : 117.38 ft/s

CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS: CAPACITY, HEAD, AND EFFICIENCY.



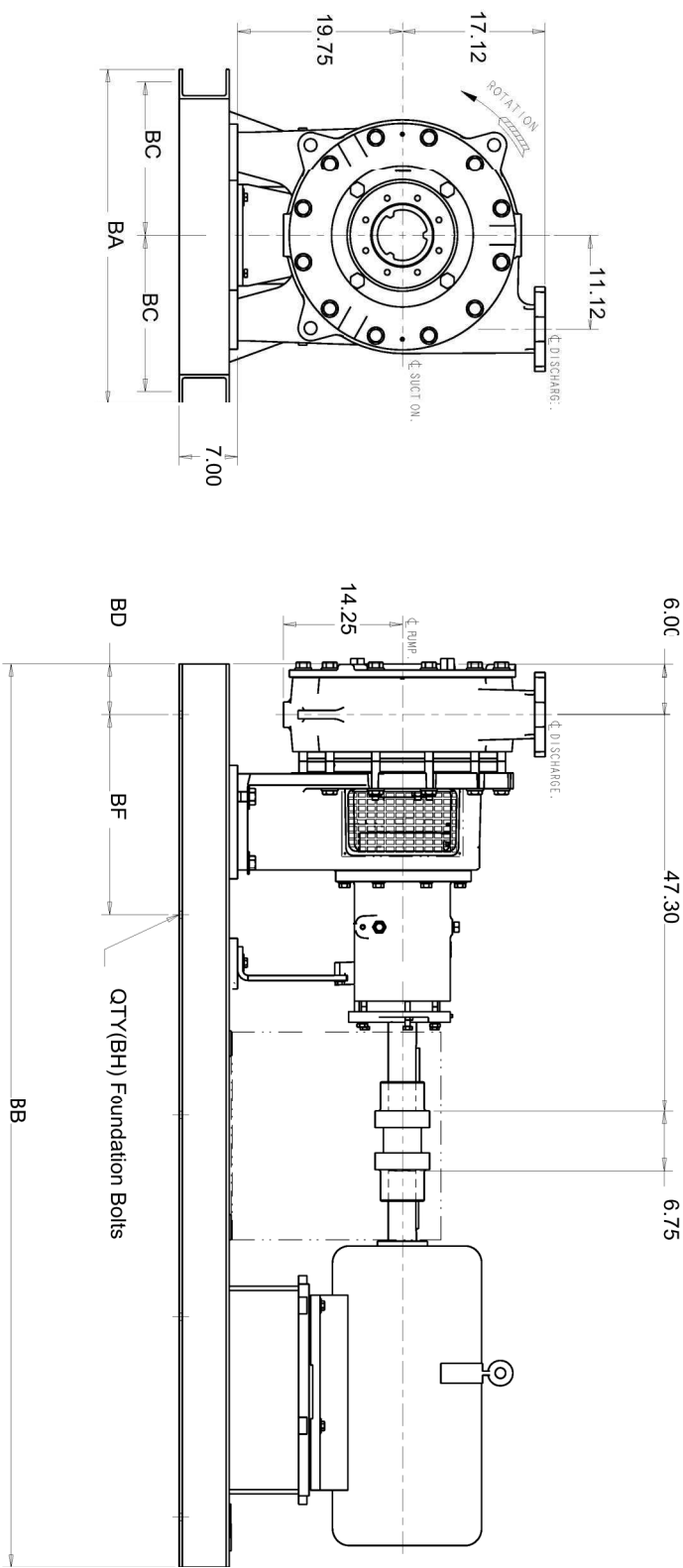
Desmet Tag	WEP Tag
P622.1/1	19-P-762A
P622.1/2	19-P-762B
P622.2/1	19-P-862A
P622.2/2	19-P-862B

Copyright © 2016 Flowserve. All rights reserved. Affinity v2.19.0

PRELIMINARY ONLY, NOT FOR CONSTRUCTION
DO NOT USE UNLESS CERTIFIED.

Discharge Flange - Ansi (inch): 4.0
Suction Flange - Ansi (inch) : 6.0

Desmet Tag **WEP Tag**
P622.1/1 **19-P-762A**
P622.1/2 **19-P-762B**
P622.2/1 **19-P-862A**
P622.2/2 **19-P-862B**



MOTOR FRAME & BASE	
BASE	MOTOR FRAME
2548	284T - 215T & 215T
2560	254T-324TS & 254U - 364US
3160	254T-324TS & 284U
3172	326TS - 409TS & 326US - 445US
3794	324TS - 447TS & 364US - 445US
3796	447TS & 586S
4306	404TS & 444US
43108	404TS-447TS & 444US
43120	586S-764BS
SPECIAL	764BS

BASE	BA	BB	BC	BD	BE	BF	BH
2548	25	48	11	4	2	20	6
2560	25	60	11	3	3	18	8
3160	31	60	14	3	3	20	8
3172	31	72	14	6	3	20	8
3772	37	72	17	6	3	20	8
3794	37	84	17	2	4	20	10
3796	37	96	17	3	5	18	12
4306	43	96	20	4	5	20	12
43108	43	108	20	4	5	20	12
43120	43	120	20	6	6	18	14

Customer : DESMET PROCESS & TECHN...
Item number : P622.1 / P622.2
Service : Bleacher Filter Feed
Customer PO # : -
Flowserve reference : 1989206898

Pump size & type : 4M223
Pump speed / Stages : 1,270 rpm / 1
Flow / Head : 596.4 USgpm / 236.00 ft
Driver power / Frame : 100 hp / 74.6 kW / -
Volts / Phase / Hz : 460 / -1 / 60 Hz

Drawing number : -
Date : July 29, 2021
Certified by / Date : -
Seal type : SLM 6200
Seal flush plan : -