✸✸ PULSAFEEDER®

▸blackline**pro**▸

MECHANICAL METERING PUMPS

METERING MADE SIMPLE.

QUALITY PRODUCTS, TRUSTED SOLUTIONS

BLACKLINE WITH BLACKLINE PRO

Pulsafeeder simplifies advanced pump technology.

The Blackline Series MD has been specifically designed to bring **outstanding value** to your operations by delivering **reliable and precise metering performance over time.** The Blackline by Pulsafeeder offers a portfolio of mechanical diaphragm pumps to fulfill a vast range of applications from water & wastewater, pulp & paper, mining, industrial processes, and many more.

Demanding applications require outstanding design and **dependable performance**. Blackline Series is your best choice with a **long-life, rugged, double-sided PTFE faced diaphragm, corrosion resistant aluminum casing, and a vast range of liquid end materials** to choose from for any application.

BLACKLINE DELIVERS RELIABLE AND STEADY PERFORMANCE OVER TIME.

The Blackline Series MD is a **motor driven, spring return mechanical diaphragm metering pump** for precise and accurate metering control. With many standard features, the Series MD includes **oil lubricated ball bearings, guided check valves, and a reinforced pump head design.**

Optional control features bring simplified operation to advanced remote control technologies.

BLACKLINE for precise and accurate metering control

EVERY ASPECT ENGINEERED FOR UNRIVALED PERFORMANCE

WIDE OPERATING RANGE

- Max Output: 7 - 132 GPH
- Pressure: 150 PSI
- Viscosity: 1000 CPS
- Turn Down: 500:1
- Capacity Range: 0.014 - 132 GPH
- Materials: PP, PVDF, 316 SS

LIQUID END

Diaphragm designed for 20,000 hours of duty with an integrated safety ring. The flat surface delivers plunger like performance. Increased reagent head bolts for superior sealing performance.

RUGGED CONSTRUCTION

Oil bath design keeps internals lubricated to maximize pump life. Over sized spring return maximizes suction lift capacity even with high viscosity fluid. Worm drive transfers motor rotational energy efficiently and quietly.
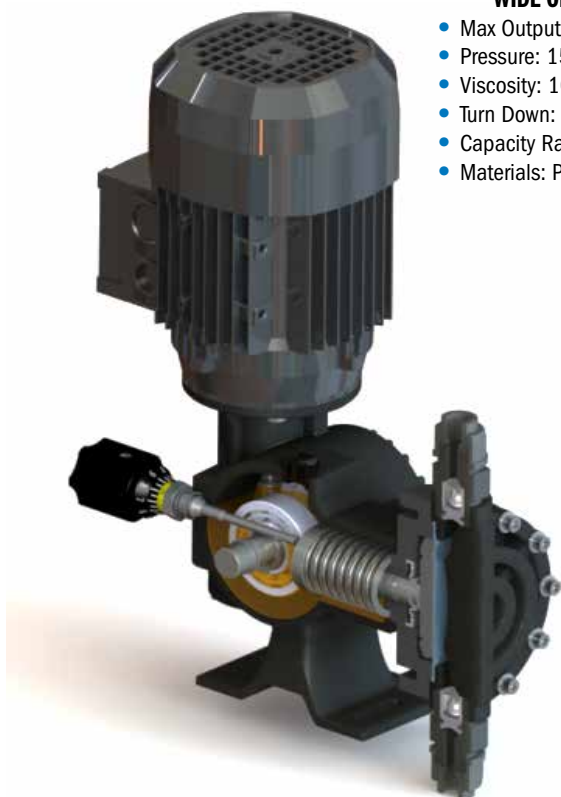
CORROSION RESISTANT ALUMINUM CASING

- Improved corrosion resistance against aggressive fumes
- Extends pump life and lowers life-cycle cost

MOTOR

- IEC 71, 56C, 3 phase, 60 Hz, 50/60Hz, options available
- Promotes standardization and enables immediate motor availability on site

PUMP HEAD

PVDF PUMP HEAD

- Combination of PVDF pump head, PTFE seats and PYREX check valves provides broad chemical compatibility
- Allows standardization on one configuration covering multiple liquids and applications

REINFORCED PUMP HEAD

- Reliable and effective sealing during operation
- 8 to 12 bolts depending on head
- ATEX rated to more than 5 times safety factor

VALVES

3 PIECE THREADED CONNECTOR (PP MODELS)

- NPT thread allows easy and simple connection to pipeline
- Reduces cost and time of installation and maintenance

DOUBLE CHECK VALVES

- Standard on models with flowrates up to 14 gph (53 lph)
- Increased accuracy when operating at low flow
- Greater flexibility of applications

GO WITH THE PRO
BLACKLINE PRO

Don't settle for a less than complete water dosing system.

Designed to suit the most critical applications with **solid construction** and a **comprehensive control interface providing ease-of-process management.** The Blackline Pro includes all of the application specific programming for any application eliminating the need for expensive custom-built PLCs'.

Pulsafeeder's new flexible solution for **remotely controlling the speed and operation** of Blackline metering pumps combines **advanced technology with easy to use programming.**

DESIGNED CONTROL SOLUTIONS PRE-FABRICATED BY EXPERTS IN WATER SYSTEMS.

The Blackline Pro versatility puts it all together for municipal water treaters, either as **Blackline pump**, **Blackline pump with Blackline Pro controller** or configured **complete with pre-plumbed inlet and discharge piping assemblies customized to your pre-engineered system needs.**
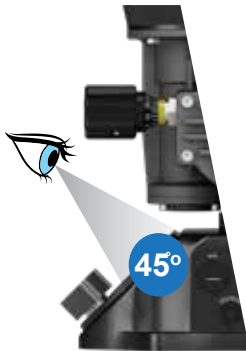
Complete Your Water System

COMPLETE YOUR DOSING SYSTEM WITH BLACKLINE PRO

EASE OF USE

- Ergonomical display - Positioned at 45° angle, clear and easy to read

- Variable gearbox orientation 0-90°, allowing installation in tight and narrow spaces

90°

45°

SIMPLE

- User friendly "JDS" Jog dial selector for easy menu navigation

COLOR CODED DISPLAY

- Intuitive color code display provides visual alerts when the system is running, needs maintenance or a failure has occurred
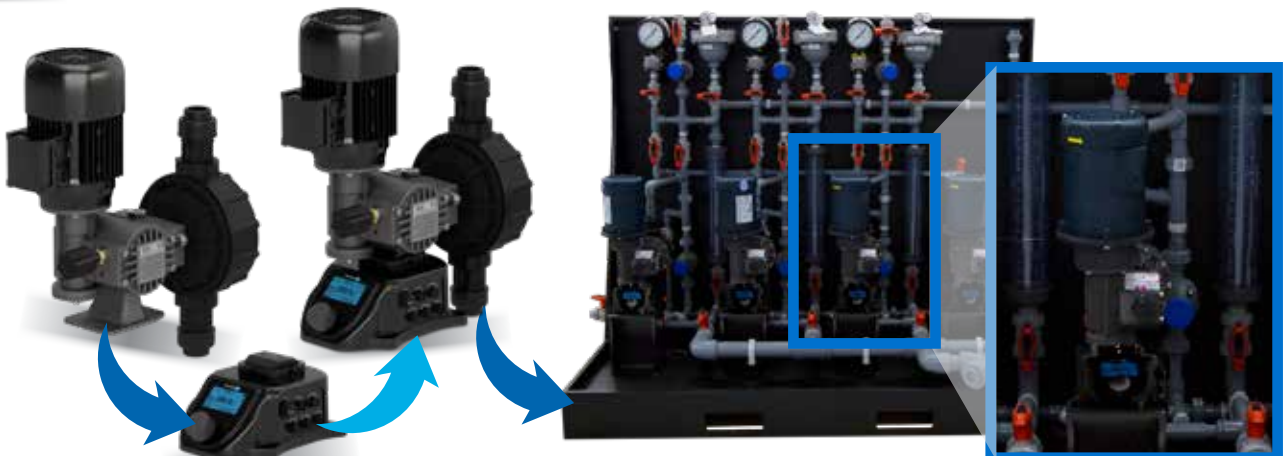
BLUE Running

YELLOW Warning

RED Alarm

VERSATILE

- Possible installation on all Blackline Series models

- Factory assembled on a Blackline pump or as a complete system

blacklinepro

MODE OF OPERATION

10 OPERATING MODES TO FIT ANY TYPE OF DOSING APPLICATION

1 CONSTANT

Runs at a constant flow rate

2 BATCH

EXTERNAL SIGNAL

Doses at set flow rate. Manual start, the process is repeated once then stops. External start, pump waits for signal to start based on settings and waits for a signal to repeat process.

3 PPM

EXTERNAL SIGNAL

Doses on concentration value and ppm required at destination based on external input signal. Timeout parameters

4 PERCENTAGE

EXTERNAL SIGNAL

Doses on concentration value and concentration required at destination based on external input signal. Timeout parameter

5 PULSE

EXTERNAL SIGNAL

Adjusts the flow rate based on value pulses per minute received between max. and min. values. Timeout parameter

6 ANALOG mA

EXTERNAL SIGNAL

4-20mA - Pump adjusts the flow rate based on an external analog signal and max. and min. values

7 ANALOG V

EXTERNAL SIGNAL

Volt - Pump adjusts the flow rate based on an external analog signal and max. and min. values

8 PAUSE-WORK

Set pause period durations with constant flow rate operation periods

9 WEEKLY

Max 13 programs, set constant flow rate or volume to be transferred, transfer duration, start time and days of activity

10 MLQ

EXTERNAL SIGNAL

Millimetres per quintal International measurement. Doses on concentration value and MLQ required at destination. Timeout parameter

QUALITY

APPROVALS

- Aluminum casing with acid resistant coating

- UL Listed
- IP65 / NEMA 4X Rated Enclosure

CONNECTIONS

The Blackline Pro dosing chemical feed system from Pulsafeeder monitors pump performance and maintenance needs via existing plant control and management systems through a **MODBUS** connection on the controller.

USB advantages: USB port can be used to input pre-configured settings to make initial setup easy from one controller to the next.

1 USB

Host-statistics; Diagnostics; Configuration copy/ backup; Firmware updating

2 LEVEL

Two digital functions for "Full" and "low" level input

3 PROXIMITY

Stroke counter for mechanical alarm detection

4 OUTPUT

4-20mA output signal + relay signal management

5 MODBUS

Integrated RS485 module for MODBUS communication protocol

6 INPUT

Analog 4-20mA input (PLC; Flowmeter) + 2 digital (ON/OFF and Pulse control)

GET INSTALLATION EASE ALONG WITH THE MOST COMPLETE CHEMICAL SYSTEM AVAILABLE

Pulsafeeder's Blackline Pro Pre-Engineered Systems are designed to provide **complete chemical feed solutions** for a wide range of metering applications. From **stand alone pH control** applications to **full-featured, sodium hypochlorite disinfection** metering. These rugged fabricated assemblies offer **installation simplicity and industrial-grade durability.**

PRE-CONFIGURED SYSTEM

- Single or dual metering pump configurations
- Includes inlet and discharge piping assemblies available in both 1/2" and 1" sizes
- UV-stabilized, high grade HDPE frame offers maximum chemical compatibility and structural rigidity
- Schedule 80 PVC, CPVC, or UHP PVDF piping
- Factory assembled and hydostatically tested prior to shipment

EASY

- Easy to install and operate
- All of the most common metering pump accessories are included
  ◊ Ball valves and unions throughout
  ◊ Suction side: Y-strainers and calibration columns
  ◊ Discharge side: pulsation dampeners, pressure gauges with isolators, and discrete back pressure and pressure-relief valves

QUICK DELIVERY

- Available within two weeks of order

MOUNTING

- The rigid 1/2" frame incorporates mounting holes and brackets for anchoring to the floor

INSTALL AND CONNECT
Eliminates the need to mix and match components for both Blackline Pro controller and Pre-Engineered custom chemical feed solutions

Blackline Pro Controller

Model Number	Description
BLPRO-KIT	Blackline Pro Controller

Blackline Pro with Blackline Pump - 1/2" NPT Connections

Model Number [1]	Head	Seats	Ball
7 GPH (26 LPH) @ 150 PSI (10 BAR), 86 SPM			
MD1AKTPN2B-XXX	PVDF	PTFE	Pyrex
MD1APPPN2B-XXX	GFPPL	PVC	Pyrex
MD1AAASN2B-XXX	316 SS	316 SS	316 SS
14 GPH (53 LPH) @ 150 PSI (10 BAR), 60 SPM			
MD1BKTPN2B-XXX	PVDF	PTFE	Pyrex
MD1BPPPN2B-XXX	GFPPL	PVC	Pyrex
MD1BAASN2B-XXX	316 SS	316 SS	316 SS
22 GPH (82 LPH) @ 150 PSI (10 BAR), 84 SPM			
MD1CKTPN2B-XXX	PVDF	PTFE	Pyrex
MD1CPPPN2B-XXX	GFPPL	PVC	Pyrex
MD1CAASN2B-XXX	316 SS	316 SS	316 SS
29 GPH (111 LPH) @ 150 PSI (10 BAR), 116 SPM			
MD1DKTPN2B-XXX	PVDF	PTFE	Pyrex
MD1DPPPN2B-XXX	GFPPL	PVC	Pyrex
MD1DAASN2B-XXX	316 SS	316 SS	316 SS
35 GPH (133 LPH) @ 150 PSI (10 BAR), 138 SPM			
MD1EKTPN2B-XXX	PVDF	PTFE	Pyrex
MD1EPPPN2B-XXX	GFPPL	PVC	Pyrex
MD1EAASN2B-XXX	316 SS	316 SS	316 SS

Blackline Pro with Blackline Pump - 3/4" NPT Connections

Model Number [1]	Head	Seats	Ball
59 GPH (225 LPH) @ 90 PSI (6 BAR), 84 SPM			
MD2FKTPN2B-XXX	PVDF	PTFE	Pyrex
MD2FPPPN2B-XXX	GFPPL	PVC	Pyrex
MD2FAASN2B-XXX	316 SS	316 SS	316 SS
79 GPH (298 LPH) @ 90 PSI (6 BAR), 118 SPM			
MD2JKTPN2B-XXX	PVDF	PTFE	Pyrex
MD2JPPPN2B-XXX	GFPPL	PVC	Pyrex
MD2JAASN2B-XXX	316 SS	316 SS	316 SS
98 GPH (371 LPH) @ 75 PSI (5 BAR), 138 SPM			
MD2KKTPN2B-XXX	PVDF	PTFE	Pyrex
MD2KPPPN2B-XXX	GFPPL	PVC	Pyrex
MD2KAASN2B-XXX	316 SS	316 SS	316 SS

Blackline Pro with Blackline Pump - 1" NPT Connections

Model Number [1]	Head	Seats	Ball
132 GPH (501 LPH) @ 75 PSI (5 BAR), 118 SPM			
MD3GKTPN2B-XXX	PVDF	PTFE	Pyrex
MD3GPPPN2B-XXX	GFPPL	PVC	Pyrex
MD3GAASN2B-XXX	316 SS	316 SS	316 SS

1. All models Input Power/Motor: TEFC, NEMA 56C, 3P, 230/460V, 50/60 Hz, 1/2 Hp

PERFORMANCE RANGE

DIMENSIONS

PULSAFEEDER

IDEX
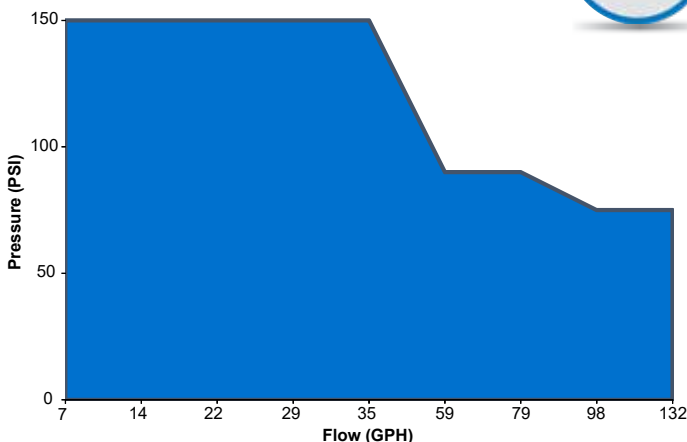
AN ISO 9001 CERTIFIED COMPANY
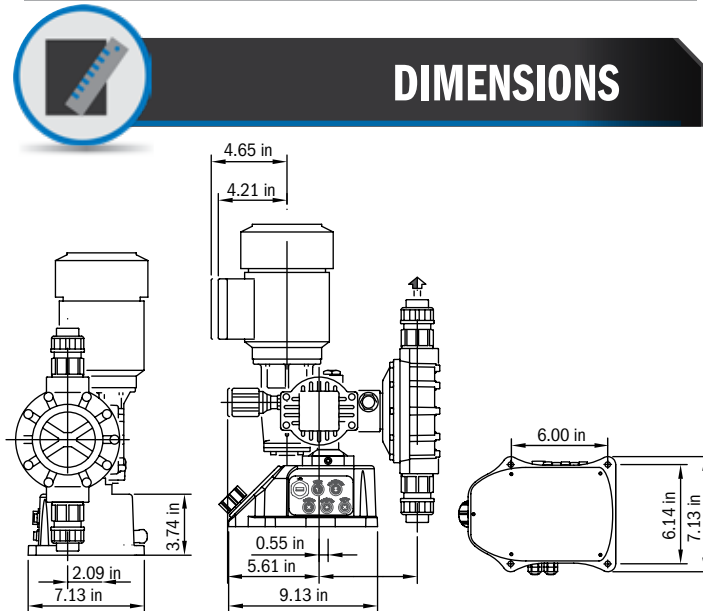
27101 AIRPORT ROAD · PUNTA GORDA, FL 33982

PH: 941.575.3800 · FAX: 941.575.4085

PULSATRON.COM

BPB001 B19