

PULSAFEEDER®

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 in a die-cast aluminum housing, long life reinforced PTFE diaphragm, micrometer style stroke length adjuster and many liquid end material options to suit any application.

Nine distinct models are available, having flow capabilities to 132 GPH (500 LPH) and pressures to 150 PSI (10 BAR), with a standard turndown ratio of 10:1 or up to 100:1 with the optional VFD Vector Drive. Metering performance is reproducible to within $\pm 2\%$ of maximum capacity.

Standard Features

- Liquid End Materials – GFPP, 316 SS & PVDF.
- Rugged double-sided PTFE faced, long life diaphragm.
- Oil lubricated ball bearings in die-cast aluminum housing.
- Manual micrometer style stroke adjustment; 10:1 turndown, up to 100:1 with VFD Vector.
- Standard NEMA 56C or IEC71 motor frames available.

Optional Features

- Variable Frequency Drive for Automatic Control.
 - ❖ Fully Scalable 4-20mA, 0-10VDC signals.
 - ❖ NEMA 4X Enclosure.
- ATEX Group II, Category 3 – Zone 2/22 for non-flammable liquids with proper motor selection.

Operating Benefits

- Reliable metering performance.
- Highly efficient operation.
- High viscosity capability.
 - ❖ Up to 1000 CPS
- Leak-free, seal-less, liquid end.



Controls



Manual or Automatic Stroke Length

- Turn-Down Ratio 10:1



VFD Stroke Rate

- Turn-Down Ratio 10:1
- 4-20mA or 0-10VDC Input

Aftermarket

- KOPkits
- Gauges
- Dampeners
- Pressure Relief Valves
- Tanks
- Pre-Engineered Systems
- Process Controllers- MicroVision



BLACK
LINE Series MD
Mechanical Diaphragm Pumps

BLACK LINE Series MD

Specifications and Model Selection

MODEL		MD1A	MD1B	MD1C	MD1D	MD1E	MD2F	MD2G	MD2H	MD3G
Capacity nominal (max.)	GPH	7	14	22	29	35	59	79	98	132
	LPH	26	53	83	110	132	223	299	371	500
Pressure (max.)	PSIG	150	150	150	150	150	90	90	75	75
	BAR	10	10	10	10	10	6	6	5	5
Strokes/Minute	SPM	84	60	84	116	138	84	118	138	118
Viscosity	CPS	1000			500		1000	500		
Connections:	FNPT	1/2"					3/4"	1"		
	BSPT-F									

Engineering Data

Liquid End Materials Available:

GFPPL Head & Valves
 PVDF Head & Valves
 316 SS Head & valves
 PVC on GFPPL Liquid End
 PTFE on PVDF Liquid End
 316 SS on 316 SS Liquid End
 Incoloy (Optional Construction)
 Pyrex on GFPPL and PVDF Liquid End
 316 SS on 316SS Liquid End
 Hastelloy C-276 (Optional Construction)

Valve Seat Materials:

Valve Check Ball Materials:

Important: Material Code - GFPPL=Glass-filled Polypropylene,
 PVDF=Polyvinylidene Fluoride.

Engineering Data

Reproducibility:

Viscosity Max CPS:

Stroke Frequency Max SPM:

Stroke Length Turn-Down Ratio:

Power Input:

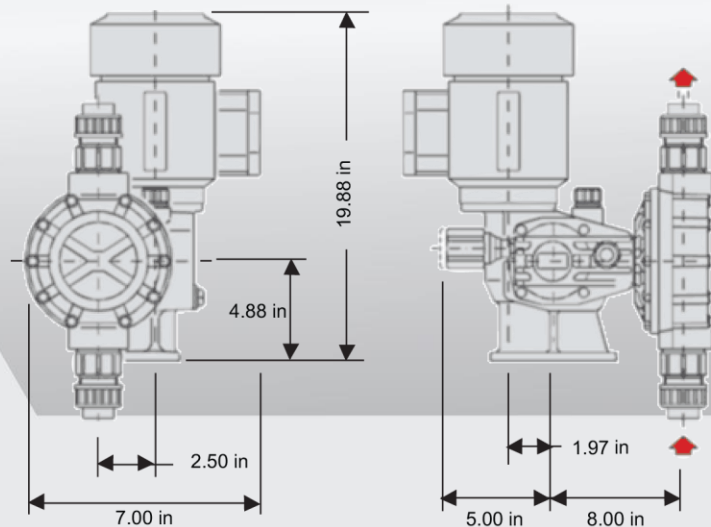
Max Ambient Temperature:

Max Fluid Temperature:

Oil Capacity:

+/- 2% at maximum capacity
 up to 1000 CPS
 60 to 138 Strokes Per Minute
 max. (Depending on model selection)
 10:1
 115 VAC/60 Hz/1 ph
 230 VAC/50-60 Hz/1 ph or 3 ph
 104°F (40°C)
 104°F (40°C)
 15.2 oz (0.4 L)

Dimensions



Series MD Dimensions (inches)			
Model	Box Dimensions	Weight Plastic (lbs)	Weight Stainless Steel (lbs)
MD1A (NO MOTOR)	19 x 19 x 10	21.5	26.0
MD1B (NO MOTOR)	20 x 19 x 10	21.5	26.0
MD1C (NO MOTOR)	21 x 19 x 10	21.5	26.0
MD1D (NO MOTOR)	22 x 19 x 10	21.5	26.0
MD1E (NO MOTOR)	23 x 19 x 10	21.5	26.0
MD2F (NO MOTOR)	24 x 19 x 10	26.0	37.0
MD2G (NO MOTOR)	25 x 19 x 10	26.0	37.0
MD2H (NO MOTOR)	26 x 19 x 10	26.0	37.0
MD3G (NO MOTOR)	27 x 19 x 10	29.0	46.0
MD1A W/VFD & MOTOR	27 x 17.4 x 18.75	67.0	71.5
MD1B W/VFD & MOTOR	28 x 17.4 x 18.75	67.0	71.5
MD1C W/VFD & MOTOR	29 x 17.4 x 18.75	67.0	71.5
MD1D W/VFD & MOTOR	30 x 17.4 x 18.75	67.0	71.5
MD1E W/VFD & MOTOR	31 x 17.4 x 18.75	67.0	71.5
MD2F W/VFD & MOTOR	32 x 17.4 x 18.75	71.5	82.5
MD2G W/VFD & MOTOR	33 x 17.4 x 18.75	72.5	83.5
MD2H W/VFD & MOTOR	34 x 17.4 x 18.75	73.5	84.5
MD3G W/VFD & MOTOR	35 x 17.4 x 18.75	74.5	91.5



27101 Airport Road
 Punta Gorda, FL 33982
 Phone: ++1(941) 575-3800
 Fax: ++1(941) 575-4085

www.pulsatron.com



An ISO 9001 Certified Company



sales@novatech-usa.com
 www.novatech-usa.com
 Tel: (866) 433-6682 Fax: (866) 433-6684
 Tel: (281) 359-8538 Fax: (281) 359-0084

BLMD001 E15

