D_MR-H-XR_GB_03'25

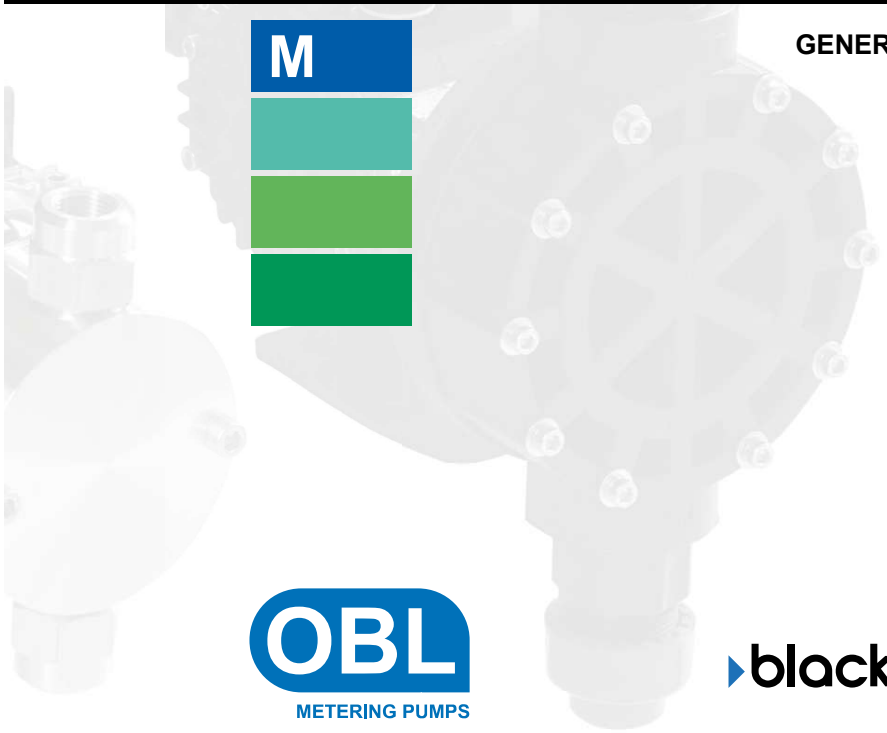
QUANGMINH
www.quangminhvn.com

blackline
an OBL brand

PLUNGER AND DIAPHRAGM METERING PUMPS

M

GENERAL CATALOGUE



OBL
METERING PUMPS

blackline pro
an OBL brand

Motor UNEL-MEC:
Motor UNEL-MEC standard 3 phase, 50/60Hz. Single phase and ATEX options available.
Promotes standardization and enables immediate motor availability on site.

Anodized Aluminum Casing:
Improved corrosion resistance against aggressive fumes.
Extends pump life and lowers life-cycle cost.

Spring return mechanism with oversized bearing.
Extends pump life and lowers life-cycle cost.

Increased number of pumphead locking screw (12 pcs in large models).
Reliable and effective sealing during operation.



3pcs threaded connector (PP models), Metric or Inch standard:
BSP or NPT thread allows easy and simple connection to pipeline.
Reduces cost and time of installation and maintenance.

Double check valves are standard on models with flowrates up to 50 l/h, optional on flows upto 155 l/h.
Increased accuracy when operating at low flow.
Greater flexibility of applications

Injection molded PVDF pumphead:

PVDF pumphead:
Combination of PVDF pumphead, PTFE seats and PYREX check valves provides broad chemical compatibility.
Allows standardization on one configuration covering multiple liquids and applications.



ATEX

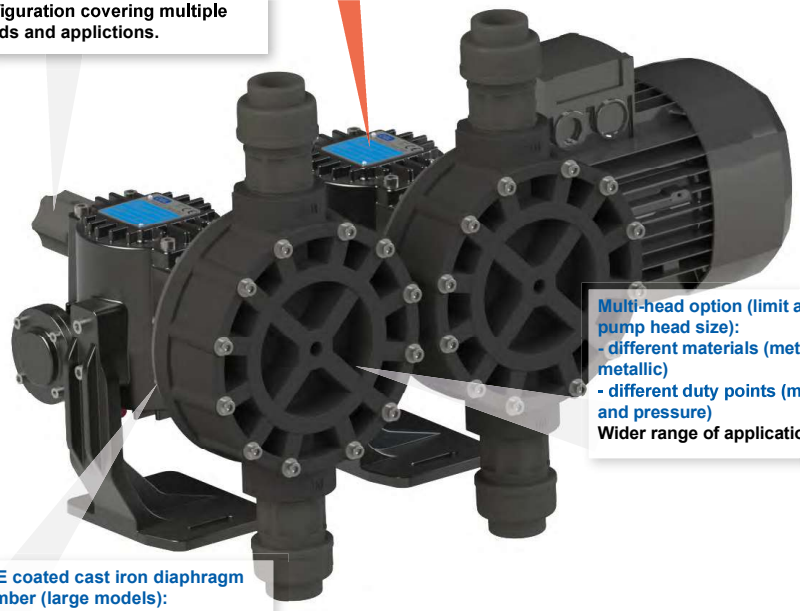
ALL models comply with ATEX (2014/34/CE) Group II, Category 3 (zone 2/22).

Individual gearbox reducer for each pumphead:
Now you can have pumpheads with different S.P.M.
Enhanced flexibility.

All possible combinations up to 10 pumpheads



Individual adjustment for each pumphead:
Standard manual adjustment via graduated knob or optional extra electric actuator.
Greater range of applications
Allows standardization on one configuration covering multiple liquids and applictions.



Multi-head option (limit according to pump head size):
- different materials (metallic and Non metallic)
- different duty points (max flow rates and pressure)
Wider range of applications.

PTFE coated cast iron diaphragm chamber (large models):
Increased resistance in case of liquid spillage to reduce maintenance cost.
Extends pump life and lowers life-cycle cost.

Duplex unit with manifolds:
Achieving flowrates up to 1.042 l/h



ATEX

ALL models comply with ATEX (2014/34/CE) Group II, Category 3 (zone 2/22).

Sectional view

THREADED CONNECTIONS

P1 P1



A AISI-316L



FLANGED CONNECTIONS

P1 P1



A AISI-316L



FEATURES & BENEFITS

Valve & Seat material options: Ceramic, Stainless Steel, Incoloy-825, Hastelloy C-276.
Increased performance when handling high density and viscous liquids as well as highly abrasive and aggressive fluids while minimizing cost impact.
Extends pump life and lowers life-cycle cost.

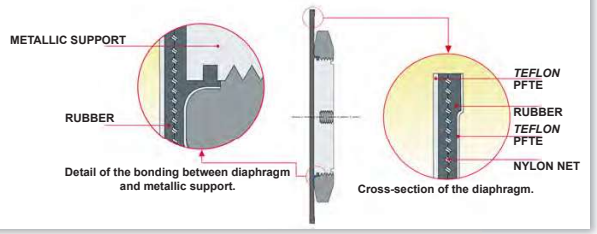
Diaphragm Structure

OBL's mechanical diaphragm operates similar to a plunger by delivering the swept volume of the diaphragm whilst acting as a separating element between casing and liquid end. OBL's unique diaphragm design allows controlled volumetric displacement and ensures a linear proportional flowrate according to stroke length setting.

FEATURE & BENEFITS

PP diaphragm back-support ring: Protection against discharge overpressure.
Reduces downtime and cleanup, "minimizing" chemical exposure.





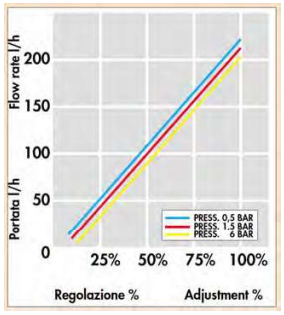
Flowrate linearity

OBL mechanical diaphragm pumps operation reflects that of a plunger pump providing similar flowrate linearity. this peculiarity is highlighted in the diagram on the left. The progress of the flow lines is clearly linear and proportional to stroke length adjustment.

FEATURES & BENEFITS

Multiple layer PTFE diaphragm:
Flowrate is virtually unaffected by working pressure variations (1% less flow with every additional bar above 1,5 barg.)
- Protection against corrosive fumes entering the diaphragm chamber
- Reduced friction thanks to diaphragm supporting-ring
- Optimal leak-free seal thanks to stress-proof diaphragm

Extends pump life and lowers life-cycle cost.



Markets & Applications

OBL pumps are designed to cover the needs of your system and other applications listed below:

BOILERS Water Quality Control



- Corrosion Inhibitors (Oxygen scavengers, etc) Anti-scaling reagents.
- Conductivity control (chemistry adjustment) pH control (acids and caustics).
- ORP (Oxidation-Reduction Potential) Anti-fouling and biological growth control (Biocides).

CHEMICAL



- Various Additive and Reactors (Chemical Reaction Process).
- Drum / Tote.
- Injection, Mixing and much more.

MINING



- Ore Separation: Leaching process (cyanides, sulphuric acid, solvents, etc.).
- Flotation collectors (polymers, etc). Defoamers emulsifiers. Depressants and Dispersant chemicals (Iron sulfide).
- Dust control (Dosing of wetting chemicals).

COOLING TOWERS Water Quality Control



- Corrosion Inhibitors, Anti-scaling reagents, pH control (acids and caustics).
- ORP (Oxidation-Reduction Potential) Anti-fouling and biological growth control (Biocides).

WATER TREATMENT Chemical Additivation



- Odors Control (Hydrogen peroxide, Potassium permanganate, Activated carbon).
- Ph control (dosing of acids and caustics).
- Flotation and Clarification (Aluminium Sulfate, PAC, Ferric Chloride).
- Disinfection (Chlorine, Sodium Hypochlorite).

PULP AND PAPER



- Whitening and Bleaching process (Hydrogen Peroxide, Hypochlorite, Chlorine).
- Sizing (fillers, e.g. starch, polymers), Strengthening (Urea based chemicals, etc.), Pigmentation (dyes, pigments, etc).
- De-inking chemicals in recycling paper process (Sodium silicates, Sodium Hydroxide, Lime, Calcium Chloride, etc.).

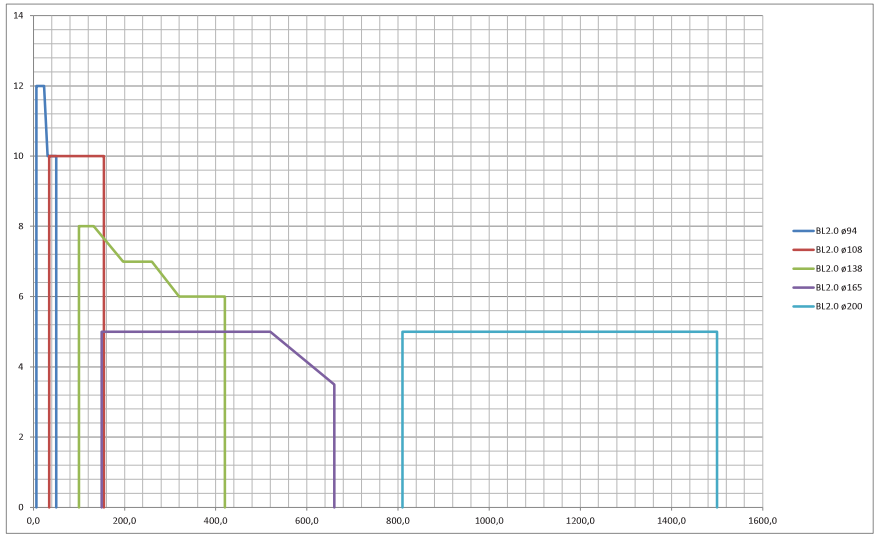
Technical data

STROKE / Ø DIAPH.	50 Hz			60 Hz			MAX PRESS. bar	
	TYPE	STROKES / 1	MAX FLOW RATE l/h	TYPE	STROKES / 1	MAX FLOW RATE l/h	3ph	1ph
2 94	**M 7** **M 11** **M 16** **M 23**	25 36 50 70	7 11 16 23	**M 9** **M 14** **M 19**	30 43 60	9 14 19	12	12
	M 31 **M 37** **M 50**	95 115 155	31 37 50	**M 28** **M 36** **M 45**	84 114 138	28 36 45	10	10
4 108	**M 35** **M 49** **M 75** **M 101**	36 50 70 95	35 49 75 101	**M 27** **M 42** **M 58** **M 90**	30 43 60 84	27 42 58 90	10	10
	M 120 **M 155**	115 155	120 155	**M 118** **M 145**	114 138	118 145	10	10
6 138	**M 102** **M 131**	36 50	100 132	**M 119**	43	120	8	8
	M 201 **M 261**	70 95	197 260	**M 158** **M 236**	60 84	158 236	7	7
	M 321 **M 421**	115 155	320 420	**M 312** **M 384**	114 138	312 384	6	6
6 165	**M 150** **M 190** **M 301**	36 50 70	150 200 300	**M 180** **M 228** **M 360**	43 60 84	165 228 350	5	5
	M 431 **M 521**	95 115	435 520	**M 519**	114	515		4
	M 660	155	660	**M 620**	138	620	3,5	3,5
20 Ø 210	**M 810** **M 1070** **M 1260** **M 1500**	70 95 115 155	810 1070 1260 1500	**M 960** **M 1140** **M 1350**	84 114 138 -	960 1140 1350 -	5	

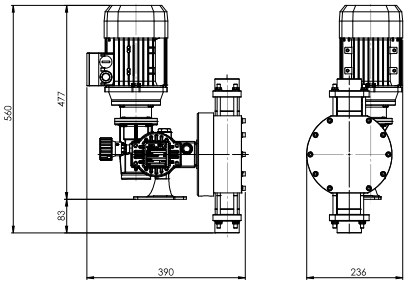
Material of construction

COMPONENTS	P1 (PP)	P2 (PP11)	P3 (PP32)	P5 (PP6)	P6 (PP582)	AA (A1111)	AB (A1121)	S6 (S562)
PUMP HEAD	PP	PP	PP	PP	PP	SS316L	SS316L	PVDF
VALVE SEAT	PVC	SS316L	INCOLOY 825	PVC	PVC	SS316L	SS316L	PTFE
VALVE GUIDE	PP	PP	PP	PP	PP	SS316L	SS316L	PVDF
VALVE (BALL)	PYREX	SS316L	HASTELLOY C-276	PTFE	PYREX	SS316L	SS316L	PYREX
VALVE SEAL	FPM	FPM	FPM	FPM	PTFE	FPM	PTFE	PTFE
VALVE HOUSING	PP	PP	PVC	PP	PP	SS316L	SS316L	PVDF
FLANGES	PVC	PVC	PVC	PVC	PVC	SS316L	SS316L	PVDF

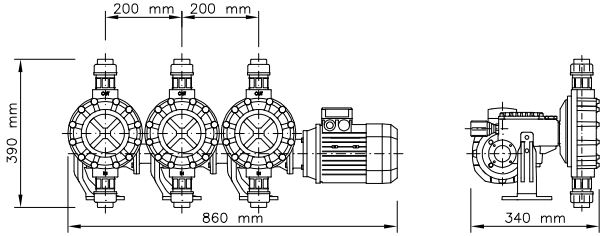
Performance



Overall dimensions



MULTIPLE PUMP - Manual Adjustment



Technical data are subject to modifications without prior notice

oblpumps.it/Blackline

OBL c/o Alfa Valvole S.r.l.
Viale Del Lavoro, 19
20003 Casorezzo (MI) - Italy
Tel. +39.02.90296206
oblinfo@alfavalvole.com
oblpumps.it

OBL
METERING PUMPS

QUANGMINH
www.quangminhvn.com