D_WD_GB_10'17

blackline
an OBL brand

PLUNGER AND DIAPHRAGM METERING PUMPS

blacklinepro
an OBL brand

GENERAL CATALOGUE

OBL
METERING PUMPS

IDEX

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.

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.

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

NEW

Cataphoresis 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.

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

ROBUST

NEW DESIGN

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.

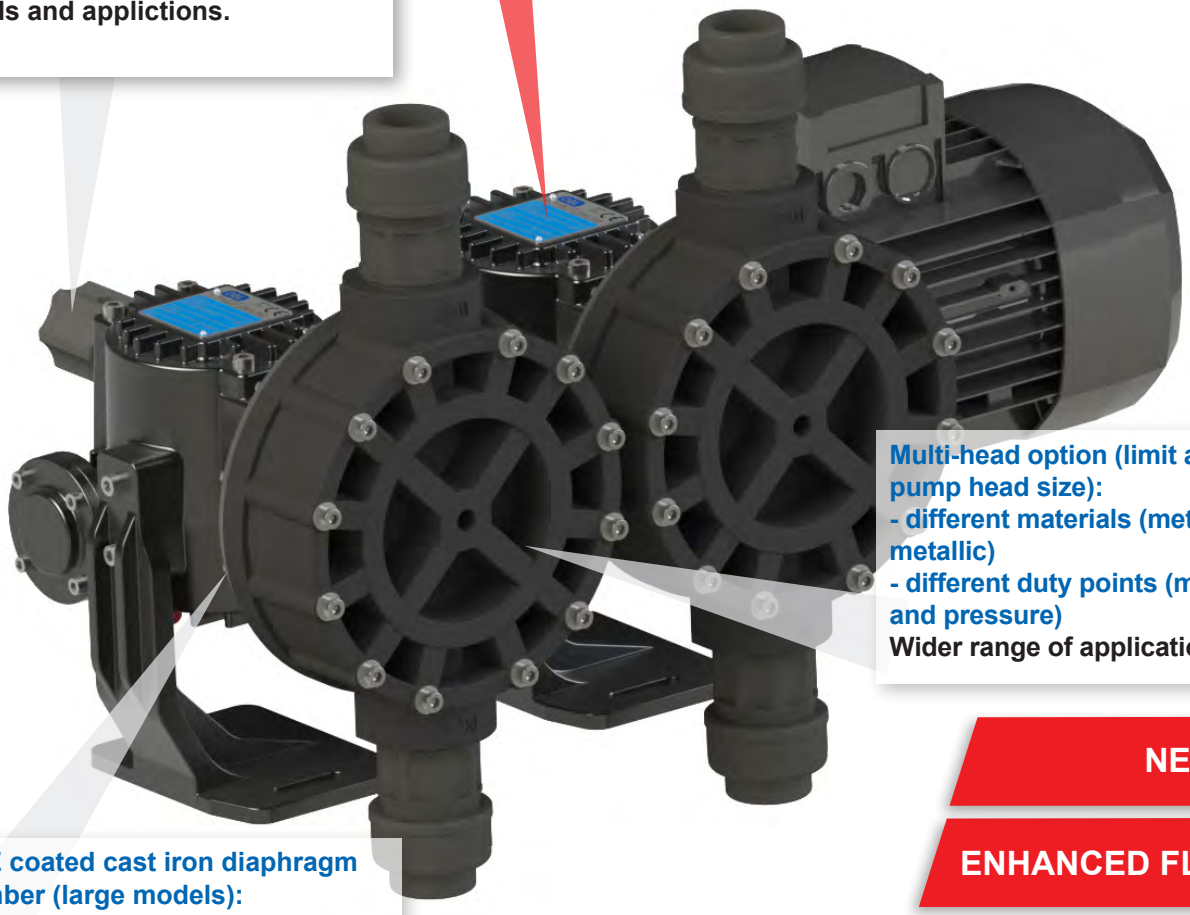
ATEX

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 blacklinepro
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.

NEW DESIGN

ENHANCED FLEXIBILITY

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

PP PP

A AISI-316L

FLANGED CONNECTIONS

PP PP

A AISI-316L

FEATURES & BENEFITS

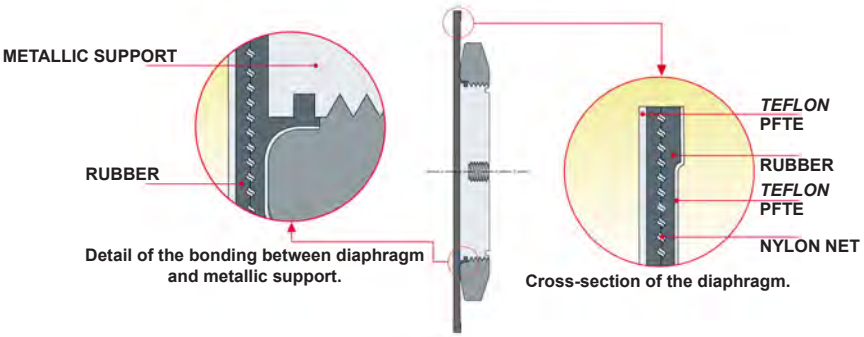
Valve & Seat material options: Ceramic, Stainless Steel, Incoloy-825, Hastelloy C-276.
Increased performance when handling high density and viscous liquids as well as highly abrasive and aggressive fluids while minimizing cost impact.
Extends pump life and lowers life-cycle cost.

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.



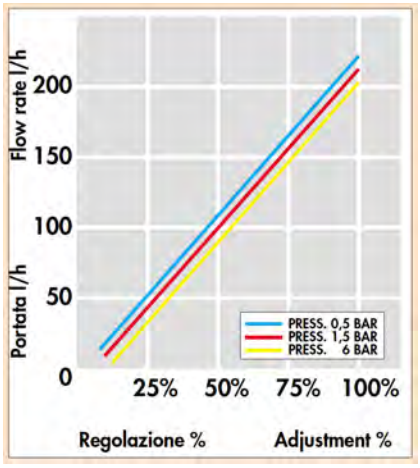
Flowrate linearity

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:

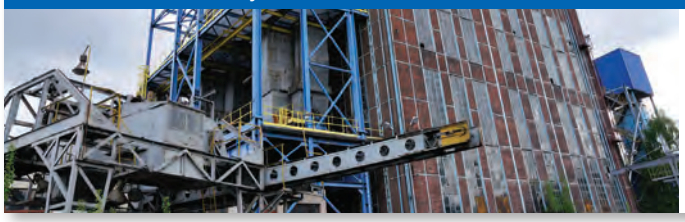
WATER TREATMENT Chemical Additivation

- 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).

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).

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.

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.).

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).

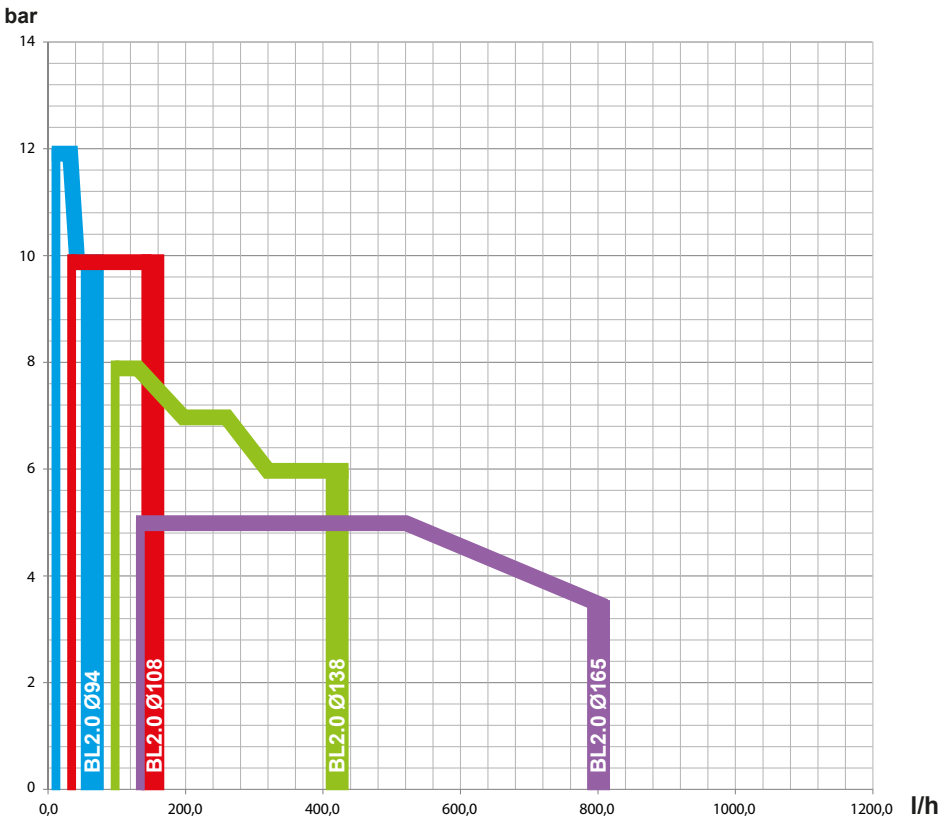
Technical data

Ø DIAPH./ STROKE	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 11** **M 16** **M 23**	36 50 70	11 16 23	**M 14** **M 19**	43 60	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** **M 120** **M 155**	36 50 70 95 115 155	35 49 75 101 120 155	**M 42** **M 58** **M 90** **M 118** **M 145**	43 60 84 114 138	42 58 90 118 145	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	"65 228 350	5	5
	M 431 **M 521**	95 115	435 520	**M 519**	114	515		4
	M 660	155	660	**M 620**	138	515	3,5	3,5
	M 800	155	800	-	-	-		

Material of construction

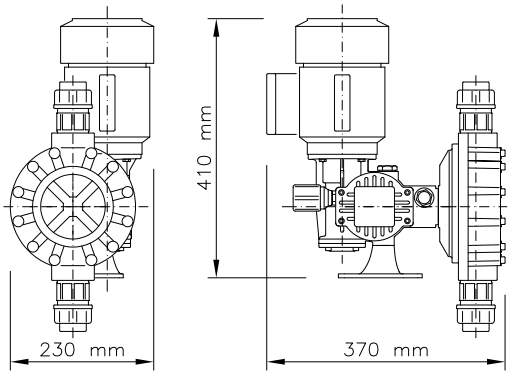
COMPONENTS	A	A1121	A32	PP (PP6)	PP11	PP32	S562
PUMP HEAD	AISI-316L	AISI-316L	AISI-316L	PP	PP	PP	PVDF
DIAPHRAGM	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
VALVE GUIDE	PP	AISI-316L	AISI-316L	PP	PP	PP	PVDF
VALVE SEAT	AISI-316L	AISI-316L	INCOLOY-825	PVC	AISI-316L	INCOLOY-825	PTFE
VALVE (BALL)	AISI-316L	AISI-316L	HASTELLOY C-276	PYREX	AISI-316L	HASTELLOY C-276	PYREX
VALVE HOUSING	AISI-316L	AISI-316L	AISI-316L	PP	PP	PP	PVDF
VALVE SEAL	FPM	FPM	FPM	FPM	FPM	FPM	PTFE
FLANGE	AISI-316L	AISI-316L	AISI-316L	PVC	PVC	PVC	PVC

Performance

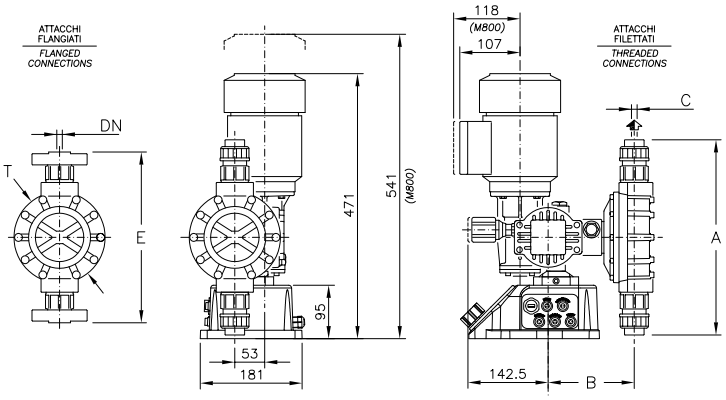


Overall dimensions

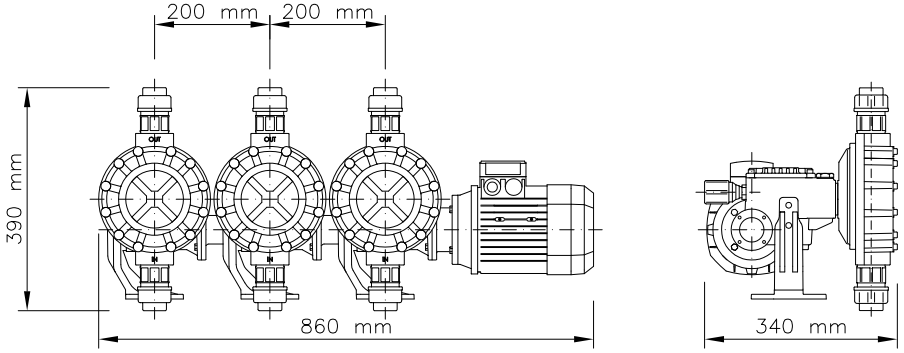
SINGLE PUMP - Manual Adjustment



SINGLE PUMP - Kit Pro Actuator Adjustment



MULTIPLE PUMP - Manual Adjustment

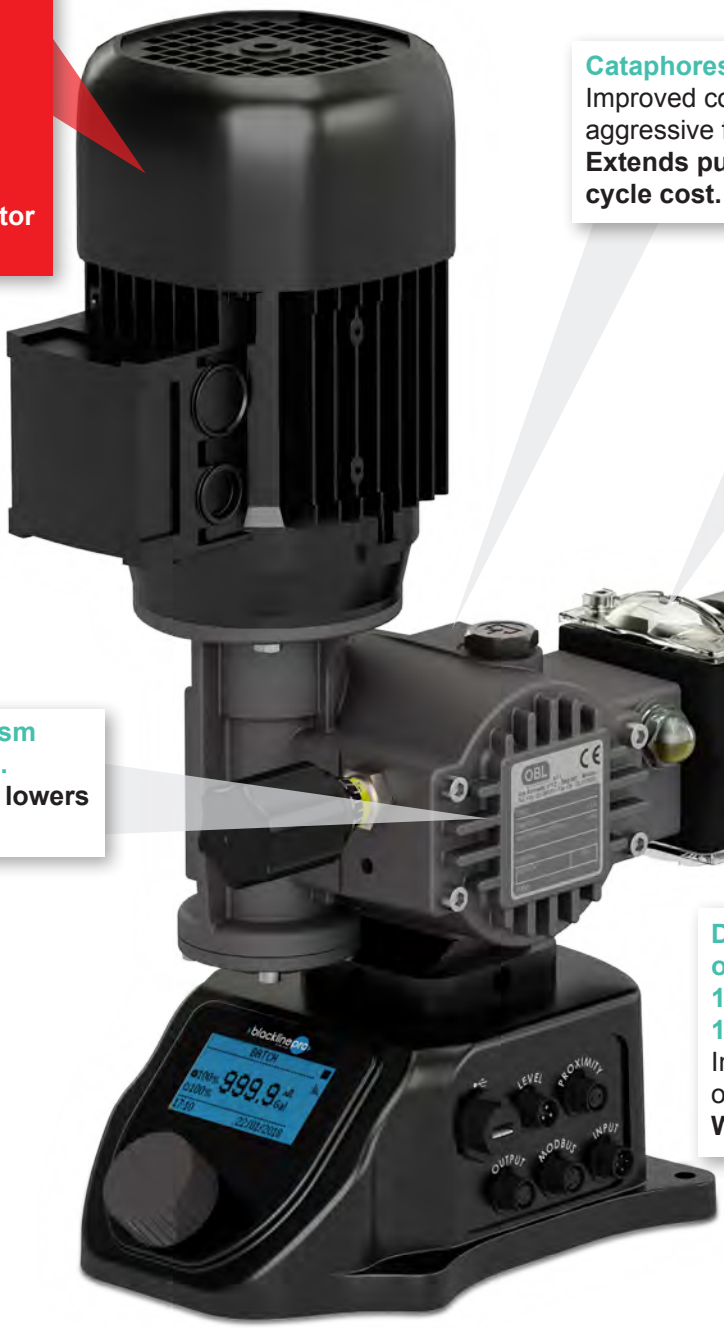


Motor UNEL-MEC:
Motor UNEL-MEC standard 3 phase, 50/60Hz.
Single phase and ATEX options available.
Promotes standardization and enables immediate motor availability on site.

NEW

Cataphoresis aluminum casing:
Improved corrosion resistance against aggressive fumes.
Extends pump life and lowers life-cycle cost.

Transparent protection covers for EC directive safety compliance.



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

Double check valves standard on models with flowrates up to 18 l/h, optional on flows upto 150 l/h.
Increased accuracy when operating at low flow.
Wider range of applications.

ROBUST

NEW DESIGN

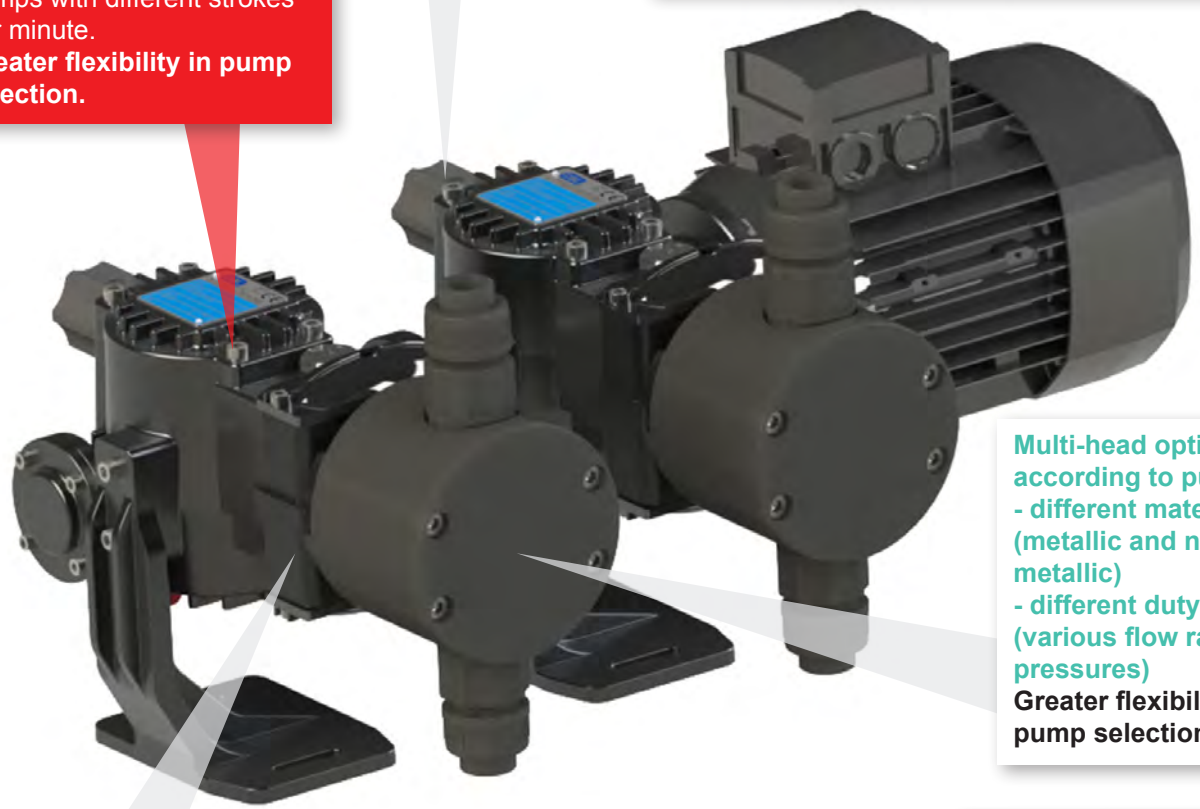
ATEX

ALL models comply with ATEX (2014/34/CE) Group II, Category 2 (zone 1/21) and Group II, Category 3 (zone 2/22).

Individual capacity adjustment for each pumphead:
standard manual adjustment via graduated knob, or optional electric stroke actuator.
Greater flexibility of applications

All possible combinations up to 10 pumpheads.

Individual gearbox for each pumphead:
Now you can have multiple pumps with different strokes per minute.
Greater flexibility in pump selection.



Multi-head option (limit according to pump size):
- different materials (metallic and non metallic)
- different duty points (various flow rates and pressures)
Greater flexibility in pump selection.

NEW DESIGN

ENHANCED FLEXIBILITY

PTFE coated cast iron yoke:
Improved chemical resistance in case of liquid spillage to reduce maintenance cost.
Extends pump life and lowers life-cycle cost.

Duplex unit with manifolds:
for flowrates up to 600 l/h

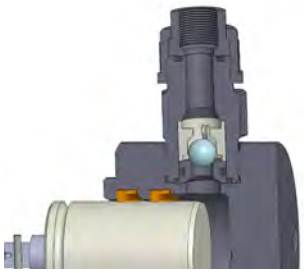
ATEX

ALL models comply with ATEX (2014/34/CE) Group II, Category 2 (zone 1/21) and Group II, Category 3 (zone 2/22).

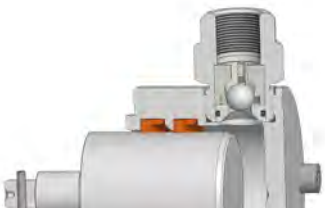
Sectional view

THREADED CONNECTIONS

P PVC

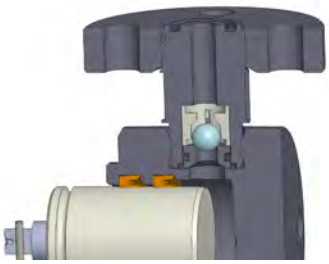


A AISI-316L

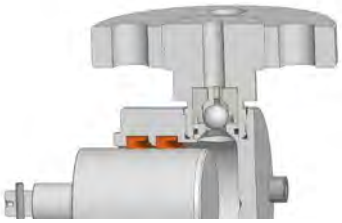


FLANGED CONNECTIONS

P PVC



A AISI-316L



FEATURES & BENEFITS

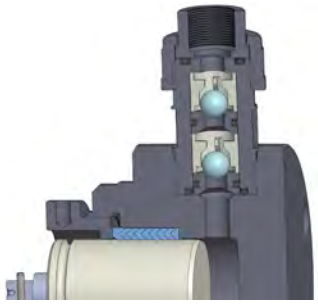
Single valve configuration only.
Very cost effective solution and economical operation.
Plunger lip seals (OBL design) available in three different materials to meet all dosing requirements.

Avoid leakages even when dosing liquids with particles in suspension.
Suitable for fluid temperatures up to +40°C for all seal types.
Plunger lip seals (OBL desing) are non adjustable.
Maximum working pressure up to 10 barg.

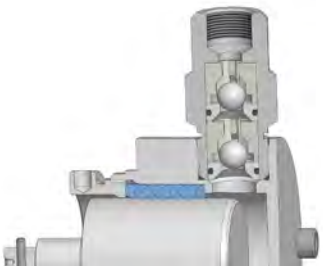
Sectional view

THREADED CONNECTIONS

P PVC

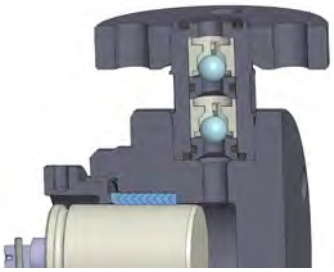


A AISI-316L



FLANGED CONNECTIONS

P PVC



A AISI-316L

FEATURES & BENEFITS

Double check valves available.
High dosing accuracy.
Plunger pumphead with gland nut and adjustable plunger packing.
Longer working cycles and shorter downtime for maintenance.

PTFE plunger packing rings with “V” profile (Chevron type)
Suitable for dosing high temperature fluids:
AISI 316L pumphead +90°C ; PVC pumphead +40°C
Extra length pumphead with KEVLAR reinforced PTFE braid packing. Suitable for working pressures up to 100 barg.

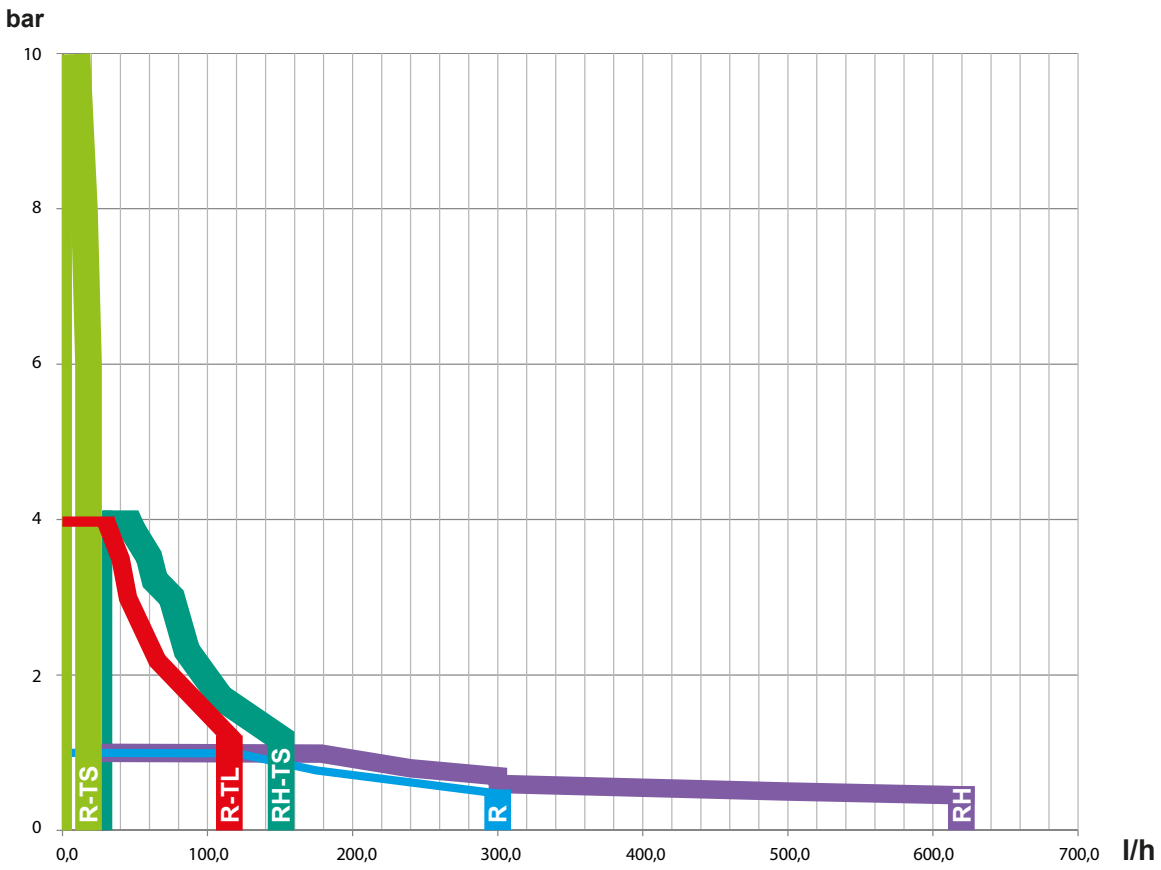
Technical data

TYPE	50 Hz		60 Hz		PUMPHEAD WITH GLAND NUT							PUMPHEAD WITHOUT GLAND NUT				MOTOR kW	
	STROKES / 1	MAX FLOW RATE l/h	STROKES / 1	MAX FLOW RATE l/h	MAX PRESS. bar			CONNECTIONS				MAX PRESS. bar		THREADED CONNECTIONS			
								THREADED		FLANGED							
					A	A-TL	P	A/A-TL	P	A/A-TL	P	A	P	A	P	3ph	1ph
R 6	50 70 95 115	0,8 1,2 1,8 2,2	43 60 84 114	0,7 1 1,5 2,2	/	40	10 ●	1/4" BSP f	1/4" BSP f DIRECT CONNECT. (NO RING NUT)	DN 15 - 1/2" ANSI	DN 15 - 1/2" ANSI	/	/	/	/	0,25 kW NO TL	0,37 kW
R 10	36 50	2 3	30 43	1,6 2,5	10	40	10 ●					/	/	/	/		
	70 95 115	4 5,5 7	60 84 114	3,4 4,8 7	10	40	10										
R 16	36 50 70 95 115	5 7 11 15 18	43 60 84 114	6 9,5 13 18	10	40	10	3/8" BSP f	3/8" BSP f			10	10	3/8" BSP f	3/8" BSP f		
R 25	36 50 70 95 115	15 20 30 38 45	43 60 84 114	16 24 33 45	10	40 40 40 35 30	10					10	10				
R 30	36 50 70 95 115	20 30 40 55 65	43 60 84 114	24 34 48 65	10	40 40 35 26 22	10					10	10				
R 43	36 50 70 95 115	40 55 90 115 150	43 60 84 114	50 78 100 150	10	12 12 12 12 /	10		1/2" BSP f			10	10	1/2" BSP f	1/2" BSP f		
R 50	36 50 70 95 115	58 80 120 160 200	43 60 84 114	70 102 140 200	10 10 10 9 8	/	10 10 10 9 8	1/2" BSP f				10 10 10 10 9	10 10 10 10 9			0,37 kW	
R 62 ◆	36 50 70 95 115	90 125 175 250 300	43 60 84 114	105 152 205 300	10 10 8 6 5	/	10 10 8 6 5	3/4" BSP f		DN 20 - 3/4" ANSI		8 8 7 6 5	8 8 7 6 5				

Material of construction

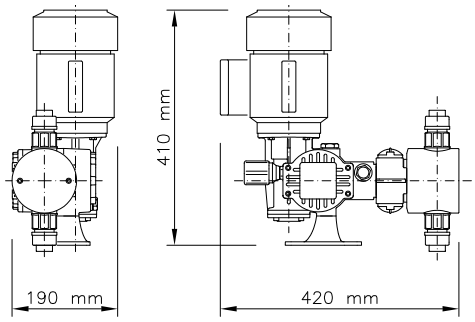
PUMPHEAD WITH GLAND NUT					
COMPONENTS	A	A-TL	P	P11	AC
PUMP HEAD	AISI-316L	AISI-316L	PVC	PVC	AISI-316L
PLUNGER	AISI-316L	AISI-316L	CERAMIC	CERAMIC	CERAMIC
PLUNGER PACKING	PTFE	PTFE	PTFE	PTFE	PTFE
VALVE GUIDE	PP/AISI-316L ◆	AISI-316L	PP	PP	AISI-316L
VALVE SEAT	AISI-316L	AISI-316L	● CERAMIC/PVC	AISI-316L	AISI-316L
VALVE (BALL)	AISI-316L	AISI-316L	● CERAMIC/PVC	AISI-316L	AISI-316L
VALVE SEAL	FPM	FPM	FPM	FPM	FPM

Performance

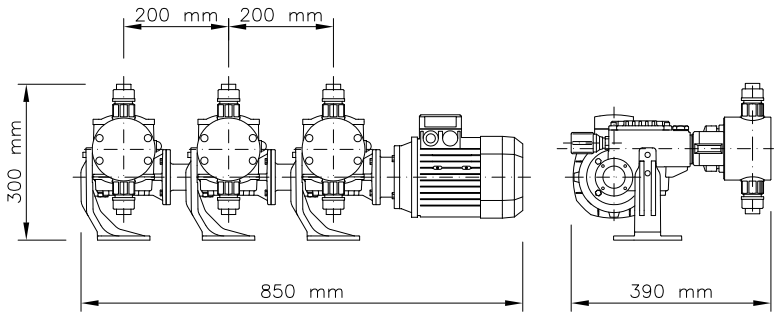


Overall dimensions

SINGLE PUMP - Manual Adjustment



MULTIPLE PUMP - Manual Adjustment



PUMPHEAD WITHOUT GLAND NUT											
COMPONENTS	**PAE**	**PAF**	**PCE**	**PCF**	**PCB**	**PCV**	**AAF**	**AAE**	**ACE**	**ACV**	**ACF**
PUMP HEAD	PVC	PVC	PVC	PVC	PVC	PVC	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L
PLUNGER	AISI-316L	AISI-316L	CERAMIC	CERAMIC	CERAMIC	CERAMIC	AISI-316L	AISI-316L	CERAMIC	CERAMIC	CERAMIC
PLUNGER PACK.	EPDM	FPM	EPDM	FPM	EPDM	VULKOL.	FPM	EPDM	EPDM	VULKOL.	FPM
VALVE GUIDE	PP	PP	PP	PP	PP	PP	PP	PP	PP	PP	PP
VALVE SEAT	AISI-316L	AISI-316L	PVC	PVC	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L
VALVE (BALL)	AISI-316L	AISI-316L	PYREX	PYREX	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L
VALVE SEAL	FPM	FPM	FPM	FPM	FPM	FPM	FPM	FPM	FPM	FPM	FPM

R-HV HIGH VISCOSITY DOSING

Technical data

TYPE	50 Hz		60 Hz		MAX PRESS. bar	CONNECTIONS	MOTOR kW	
	STROKES / 1	MAX FLOW RATE l/h	STROKES / 1	MAX FLOW RATE l/h			3ph	1ph
R 10	36 50	2 3	30 43	1,6 2,6	10	1/2" BSP f	0,25 kW	0,25 kW
R 16	36 50	4 6	30 43	3,3 5,2				
R 25	36 50	12 16	30 43	10 14				
R 30	36 50	18 25	30 43	15 22				
R 43	36 50	42 50	30 43	35 44		3/4" BSP f		
R 50	36 50	58 80	30 43	48 70			0,37 kW	0,37 kW
R 62	36 50	90 120	30 43	75 105				

HV VERSION (HIGH VISCOSITY DOSING):

Typical application: Viscous liquids and concentrated polymer (Emulsion).

- Normally threaded connections with single valves, double check valves on demand.
- plunger pumphead with gland nut and adjustable packing.
- PTFE adjustable plunger packing rings with "V" profile (Chevron type) to prevent chemical leakages.
- Suitable for fluids with viscosity up to 55000 cps.
- Max. working pressure up to 10 bar

Material of construction

COMPONENTS	HV
PUMP HEAD	AISI-316L
PLUNGER	AISI-316L
PLUNGER PACKING	PTFE
VALVE GUIDE	AISI-316L
VALVE SEAT	AISI-316L
VALVE (BALL)	AISI-316L
VALVE SEAL	FPM

R-TS HIGH PRESSURE DOSING

Technical data

TYPE	50 Hz		60 Hz		MAX PRESS. bar	CONNECTIONS	
	STROKES / 1	MAX FLOW RATE l/h	STROKES / 1	MAX FLOW RATE l/h		THREADED	FLANGED
R 10 A TS	36 50 70 95 115	2 2,8 4 5 6	43 60 84 114	2,4 3,4 4,8 6	100	3/8" NPT f	1/2" ANSI 600 RF
R 16 A TS	50 70 95 115	7 10 15 18	43 60 84 114	6 8,5 13 18	100 100 85 60		

TS VERSION (HIGH PRESSURE DOSING):

Typical application: high pressure injection of chemicals

- Double check valves with lapped seats.
- Normally threaded connections, flanged on demand
- Plunger pumphead with gland nut and adjustable plunger packing.
- Extended PTFE braid type packing reinforced with KEVLAR and intermediate ring
- Self-centring plunger
- Working pressures up to 100 barg

Material of construction

COMPONENTS	TS
PUMP HEAD	AISI-316L
PLUNGER	SAF-2205
PLUNGER PACKING	PTFE+KEVLAR
VALVE GUIDE	AISI-316L
VALVE SEAT	AISI-316L
VALVE (BALL)	AISI-316L
VALVE SEAL	FPM

R-OM MAGNESIUM OXIDE DOSING

Technical data

TYPE	50 Hz		60 Hz		MAX WORK. PRESS. bar	MAX BUILT-IN RELIEF VALVE SET PRESS. bar	CONNECTIONS
	STROKES / 1	MAX FLOW RATE l/h	STROKES / 1	MAX FLOW RATE l/h			
R 16 MA OM	25 36 50	4 6 8,5	30 43 60	4,8 7,2 10,2	60	70	3/8" BSP m
R 25 MA OM	25 36 50	10 14 20	30 43 60	12 16,8 24	35 35	45 40	
R 30 MA OM	36 50	20 30	43 60	24 36	30 25	35 30	

OM VERSION (MAGNESIUM OXIDE DOSING):

Combustion enhancing in thermal power plant.

Designed for injecting diluted magnesium oxide in combustion fuel.

The OM version was specifically engineered in 1980 by co-operating with the manufacturers of the magnesium oxide. Wetted components are made of special resistant materials.

Flow rates up to 30 l/h and working pressures of 70 barg.

Material of construction

COMPONENTS	OM
PUMP HEAD	AISI-316L
PLUNGER	CERAMIC
PLUNGER PACKING	PTFE
DIAPHRAGM	PTFE
VALVE GUIDE	AISI-316L
VALVE SEAT	TUNGSTEN CARBIDE
VALVE (BALL)	HARDENED STEEL
VALVE SEAL	FPM

HYDRAULIC DIAPHRAGM

HR/HM DIATOMACEOUS EARTH DOSING

Technical data

TYPE	50 Hz		MAX PRESS. bar	THREADED CONNECTIONS
	STROKES / 1	MAX FLOW RATE l/h		ACC
HR 43	70 95	90 115	10	1/2" BSP f
HR 50	70 95	120 160		

HR PUMPS (DIATOMACEOUS EARTH DOSING):

Tipical application: Oenological Filtration.

OBL is a leader in manufacturing metring pumps for filter pumps for FILTER AID WITH DIATOMACEOUS EARTH; used for wine, beer and fruit juice filtration. The range includes plunger pumps with lip seals and mechanical diaphragm pumps.
Use for flowrates up to 160 liters per hour and working pressure up to 10 bar.

Material of construction

COMPONENTS	A (A+M)	A-TL	P
PUMP HEAD	AISI-316L	AISI-316L	PVC
PLUNGER	AISI-316L	AISI-316L	CERAMIC
PLUNGER PACKING	PTFE	PTFE	PTFE
VALVE GUIDE	AISI-316L	AISI-316L	PVC
VALVE SEAT	AISI-316L	AISI-316L	PVC
VALVE (BALL)	AISI-316L	AISI-316L	PYREX
VALVE SEAL	FPM	FPM	FPM

PLUNGER

Ø DIAPH./STROKE	50 Hz			MAX PRESS. bar	THREADED CONNECTIONS
	TYPE	STROKES / 1	MAX FLOW RATE l/h		PP
4 108	HM 73	70	73	10	3/4" BSP m
	HM 100	95	100		

HM PUMPS (DIATOMACEOUS EARTH DOSING):

Tipical application: Oenological Filtration.

OBL is a leader in manufacturing metring pumps for filter pumps for FILTER AID WITH DIATOMACEOUS EARTH; used for wine, beer and fruit juice filtration. The range includes plunger pumps with lip seals and mechanical diaphragm pumps.
Use for flowrates up to 160 liters per hour and working pressure up to 10 bar.

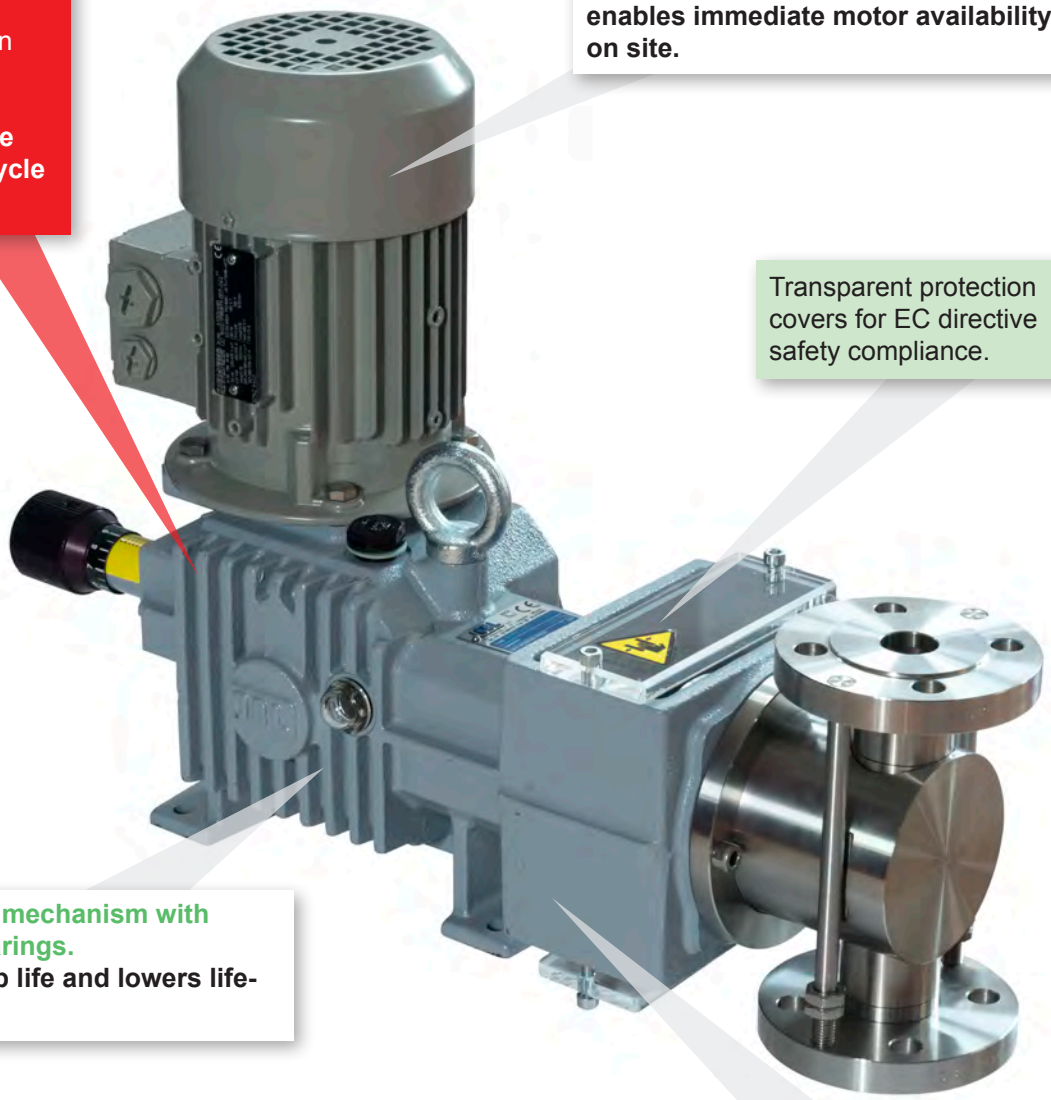
COMPONENTS	PP
PUMP HEAD	PP
DIAPHRAGM	PTFE
VALVE GUIDE	PP
VALVE SEAT	AISI-316L
VALVE (BALL)	AISI-316L
VALVE HOUSING	PP
VALVE SEAL	SILICON

MECHANICAL DIAPHRAGM

Painted cast iron casing:
Improved corrosion resistance against aggressive fumes.
Extends pump life and lowers life-cycle cost.

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.

Transparent protection covers for EC directive safety compliance.



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

Painted cast iron yoke:
Increased resistance in case of liquid spillage to reduce maintenance cost.
Extends pump life and lowers life-cycle cost.

UP TO 620 l/h

ATEX

ALL models comply with ATEX (2014/34/CE) Group II, Category 2 (zone 1/21) and Group II, Category 3 (zone 2/22).

Technical data

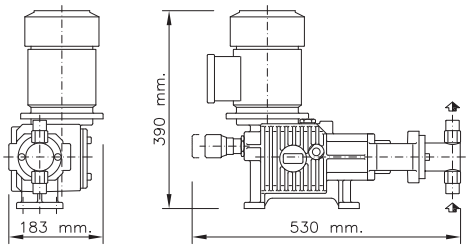
TYPE	50 Hz		60 Hz		MAX PRESS. bar				CONNECTIONS		
	STROKES / 1	MAX FLOW RATE l/h	STROKES / 1	MAX FLOW RATE l/h					THR.	FLANGED	
					A	A+M	A-TL	P	BSP f	UNI	ANSI
RH 25	42 63 86 104	29 44 60 75	50 75 98 -	34 52 70 -	/	/	40 40 35 30	/	3/8”	DN 15	1/2”
RH 30	42 63 86 104	42 64 86 110	50 75 98 -	50 75 103 -	/	/	35 32 23 20	/			
RH 40	42 63 86 104	72 110 150 200	50 75 98 -	85 130 185 -	/	/	20 17 12 /	/	1/2”		
RH 50	42 63 86 104	115 176 240 300	50 75 98 -	135 205 280 -	10 10 8 7	10 10 8 7	/	/	/	DN 20	3/4”
RH 65	42 63 86 104	195 300 410 500	50 75 98 -	235 355 470 -	6 6 5 4	6 6 5 4	/	6 6 5 4		DN 25	1”
RH 80	42 63 86	270 420 620	50 75 -	330 540 -	5 4 3,5	5 4 3,5	/	/			

Material of construction

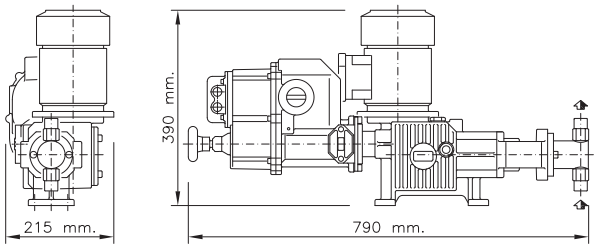
COMPONENTS	A (A+M)	A-TL	P
PUMP HEAD	AISI-316L	AISI-316L	PVC
PLUNGER	AISI-316L	AISI-316L	CERAMIC
PLUNGER PACKING	PTFE	PTFE	PTFE
VALVE GUIDE	AISI-316L	AISI-316L	PVC
VALVE SEAT	AISI-316L	AISI-316L	PVC
VALVE (BALL)	AISI-316L	AISI-316L	PYREX
VALVE SEAL	FPM	FPM	FPM

Overall dimensions

SINGLE PUMP - Manual Adjustment



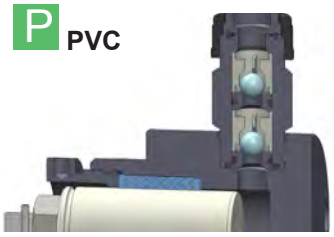
SINGLE PUMP - Electric Actuator Adjustment



Sectional view

THREADED CONNECTIONS

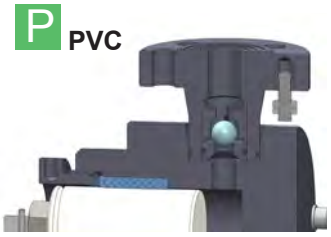
P PVC



A AISI-316L

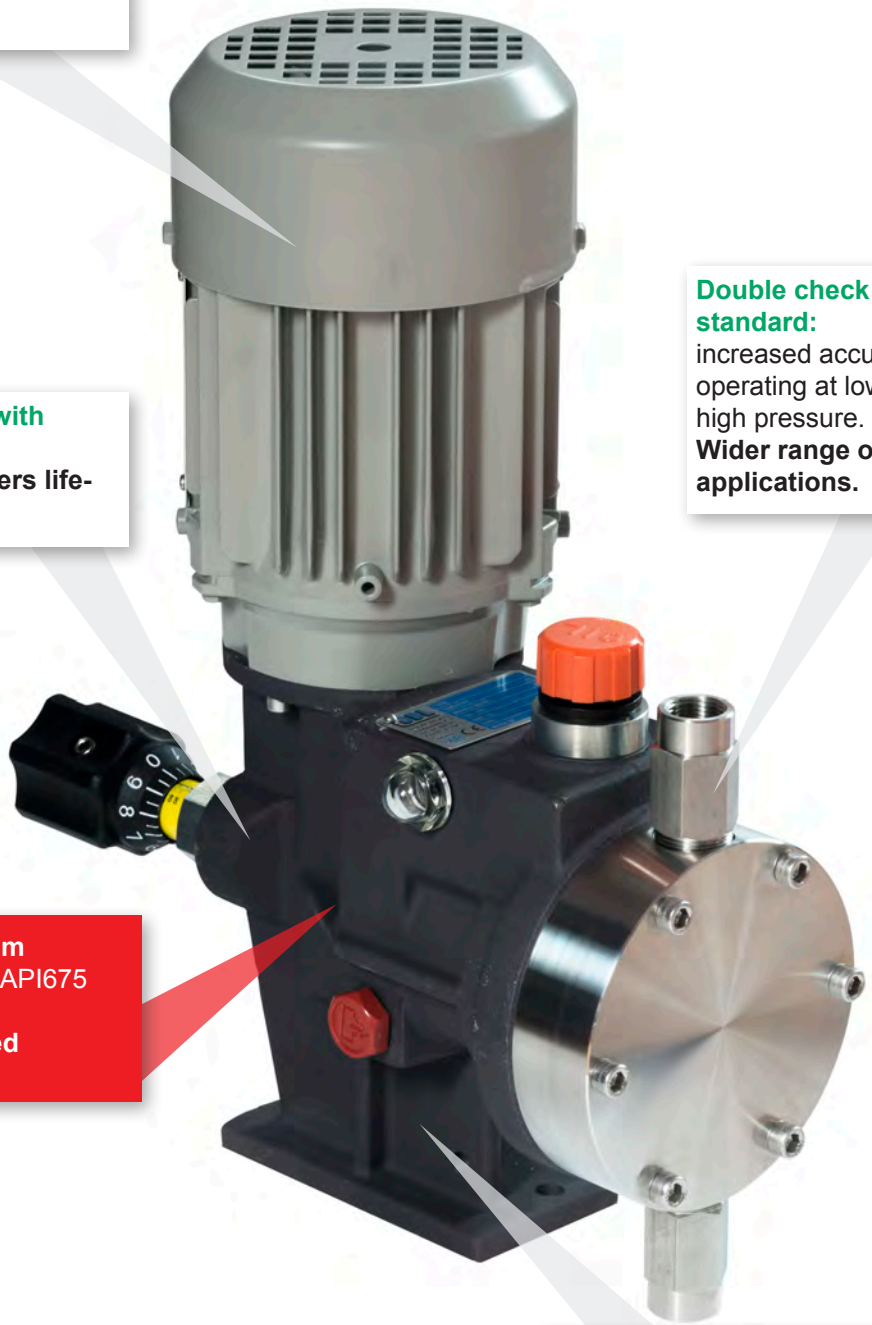
FLANGED CONNECTIONS

P PVC



A AISI-316L

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.



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

Double check vavles as standard:
increased accuracy when operating at low flows or high pressure.
Wider range of applications.

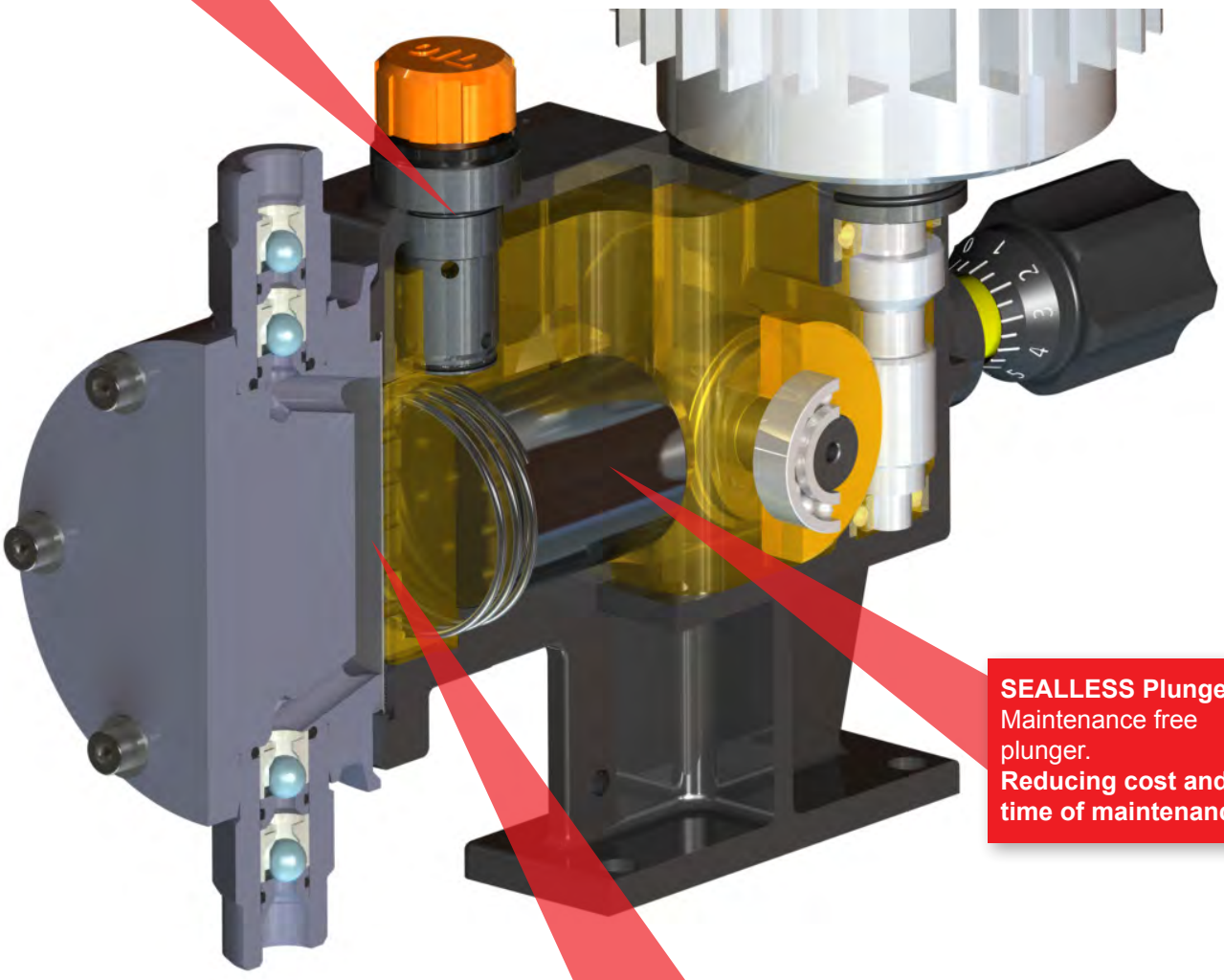
Smart Hydraulic Diaphragm
Hydraulic system based on API675 process pump design.
added safety and improved performance.

Single block anodized aluminum casing:
improved corrosion resistance against agressive fumes.
Extends pump life and lowers life-cycle cost.

ATEX

ALL models comply with ATEX (2014/34/CE) Group II, Category 2 (zone 1/21) and Group II, Category 3 (zone 2/22).

Enhanced Safety:
built-in safety valve, air-bleed valve and mechanical oil replenishing.
The pump is fully protected in case of pressure peaks or upset suction conditions.



SEALLESS Plunger
Maintenance free plunger.
Reducing cost and time of maintenance.

Simple Diaphragm Monitoring:
Diaphragm fastening is liquid tight and independent from liquid end fastening.
By removing the liquid end it is possible to check the PTFE diaphragm conditions without draining the hydraulic circuit.

ATEX

ALL models comply with ATEX (2014/34/CE) Group II, Category 2 (zone 1/21) and Group II, Category 3 (zone 2/22).

Technical data

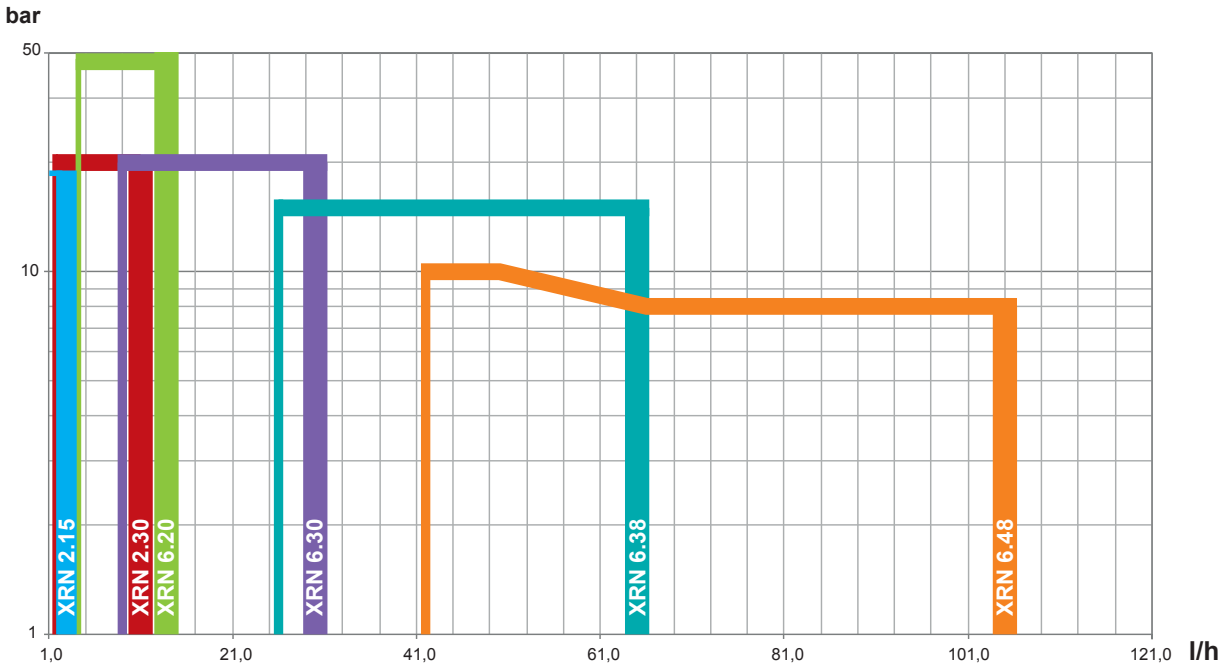
TYPE	50 Hz		60 Hz		MAX PRESS. bar ①	
	STROKES / 1	MAX FLOW RATE l/h	STROKES / 1	MAX FLOW RATE l/h	A	P - S
XRN 2.15	55 72 85 111 145	0,6 0,9 1,2 1,5 2	67 87 103 133	0,8 1 1,2 1,6	20	13
XRN 2.30	28 36 55 72 85 111 145	1,8 2,5 3,8 5 5,8 7,5 11	33 43 67 87 103 133	2,1 2,8 4,5 6 7 10	20	13
XRN 6.20	28 36 55 72 85 111 145	2 2,8 4,5 6 7,3 10 13	33 43 67 87 103 133	2,5 3,5 5,5 7,2 9 12	40	/
XRN 6.30	55 72 85 111 145	10 14 20 23 30	67 87 103 133	14 20 24 30	20	13
XRN 6.38	72 85 111 145 170	26 32 42 54 65	67 87 103 133 174	24 33 40 50 68	15	13
XRN 6.48	72 85 111 145 170	42 50 66 87 105	67 87 103 133 174	38 50 62 80 105	10 10 8 8 8	10 10 8 8 8

BUILT-IN RELIEF VALVE SET PRESS. (PSV) bar ①	
PSV SET PRESS. bar	MAX WORK. PRESS. bar
5	4
7	5,5
8	6,5
10	8,5
13	10
15	13
17	14,5
20	17
23	20
30	25
35	30

Material of construction

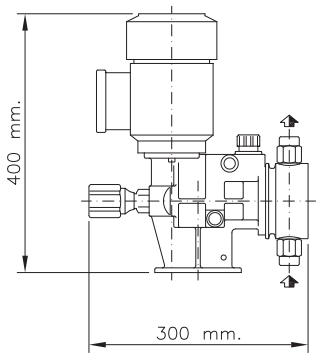
COMPONENTS	A	A32	P	P11	S
PUMP HEAD	AISI-316L	AISI-316L	PVC	PVC	PVC
DIAPHRAGM	PTFE	PTFE	PTFE	PTFE	PTFE
VALVE GUIDE	PP	PP	PP	PP	PTFE
VALVE SEAT	AISI-316L	INCOLOY-825	PVC	AISI-316L	PVC
VALVE (BALL)	AISI-316L	HASTELLOY C-276	PYREX	AISI-316L	PVC
VALVE HOUSING	AISI-316L	AISI-316L	PVC	PVC	PYREX
VALVE SEAL	FPM	FPM	FPM	FPM	FPM

Performance

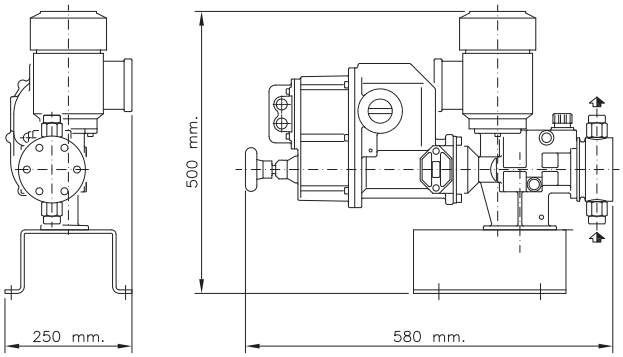


Overall dimensions

SINGLE PUMP - Manual Adjustment



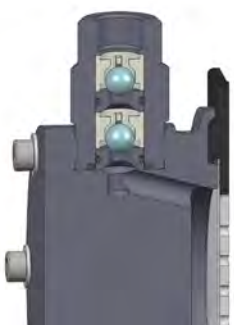
SINGLE PUMP - Electric Actuator Adjustment



Sectional view

THREADED CONNECTIONS

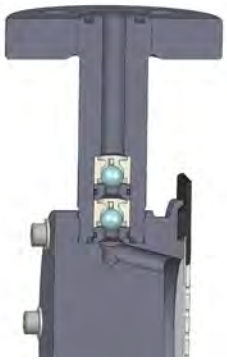
P PVC



A AISI-316L

FLANGED CONNECTIONS

P PVC



A AISI-316L

Safe area

Kit PRO

Designed to suit the most critical applications with solid construction and a comprehensive control interface providing ease-of-process management" OBLs new flexible solution for remotely controlling your Blackline 2.0 metering pump.
High quality materials and enhanced user-friendly interface makes controlling your pump simple.
10 different operating modes to fit any type of dosing application: CONSTANT / BATCH / PAUSE-WORK / WEEKLY PROGRAM / ANALOG mA / ANALOG Volt / PPM PERCENTAGE / MLQ (millilitres per quintal) / PULSE.

OBL Z type electric actuator, option available on all Blackline pump models M, R, XRN remotely controls the pumps flowrate via input signal.

ELECTRIC ACTUATOR CHARACTERISTICS

- IP 66 standard
- 115/230V – 1 – 50/60 Hz
- 4-20 mA feedback signal
- Manual emergency override
- Anticondensation heater (on demand)
- External automatic/manual selector (on demand)
- Flow-rate limiter (Q.max trimmer) allows to reduce the pump maximum flow-rate (corresponding to 20 mA command signal) up to 50% of the nameplate rated capacity.

The flowrate is adjusted according to following input signals:

- 4-20 mA, 0-20 mA, 20-4 mA and 0-10 V
- Pulses (0÷2 Hz - 0÷30 Hz)
- RS 485 communication protocol
- Profibus DP-V0

OBL DESIGN

OBL Genuine Spare Parts, keep your pump running at optimal levels

OBL has built a reputation for superior reliability by supplying high-quality products carefully-designed.
However, even the best equipment requires a minimal amount of preventative maintenance.
OBL offers KOPkits (Keep On Pumping kits) designed to guard against unnecessary downtime and assure you the highest level of efficient and uninterrupted service from your OBL pumps.
Many pumps model you purchase has a unique KOPkit of spare parts.
It contains all the parts needed to assure reliable operation.
There may be different levels of kits based on your pump model.
A KOPkit is a troubleshooter's best friend.
In the event of a breakdown, it will put you back in business fast!
Preventative maintenance will insure continuous high performance of your pump.
OBL assure the ready availability of all the spare parts of the pumps.

LEARN MORE AT

http://oblblackline.com

We show how easy it is to repair your pump with detailed service videos that teach you how to correctly maintain your OBL pump.
Follow the advice of our experienced team.

OBL Genuine Spare Parts: the right choice

OBL
GENUINE SPARE PARTS

SAVE MONEY BY ORDERING PART KITS
Ordering parts kits as opposed to individual components:
- Reduces frequency of repairs
- Reduced downtime
- Reduces cost
- Increases uptime
- Improves parts availability
- Extends service life

OBL has a solution whether your pump needs quick, urgent maintenance or a full service repair.

REPAIR IT ONCE, REPAIR IT RIGHT !

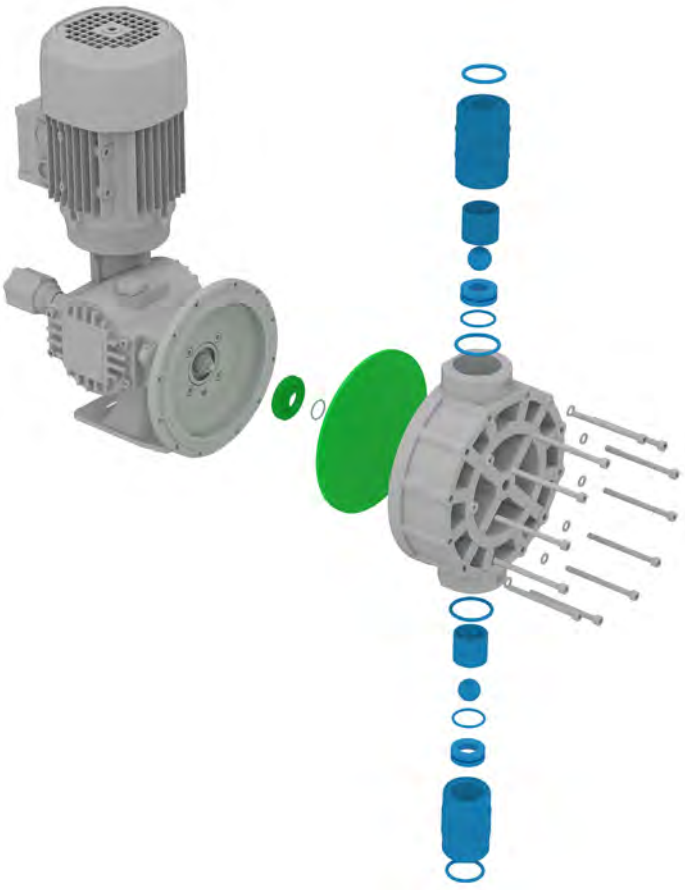
Everithing in One Place !
All of the parts you need to get running again.

Reduce Frequency of Repairs !
Reliable replacement parts are guaranteed to last.

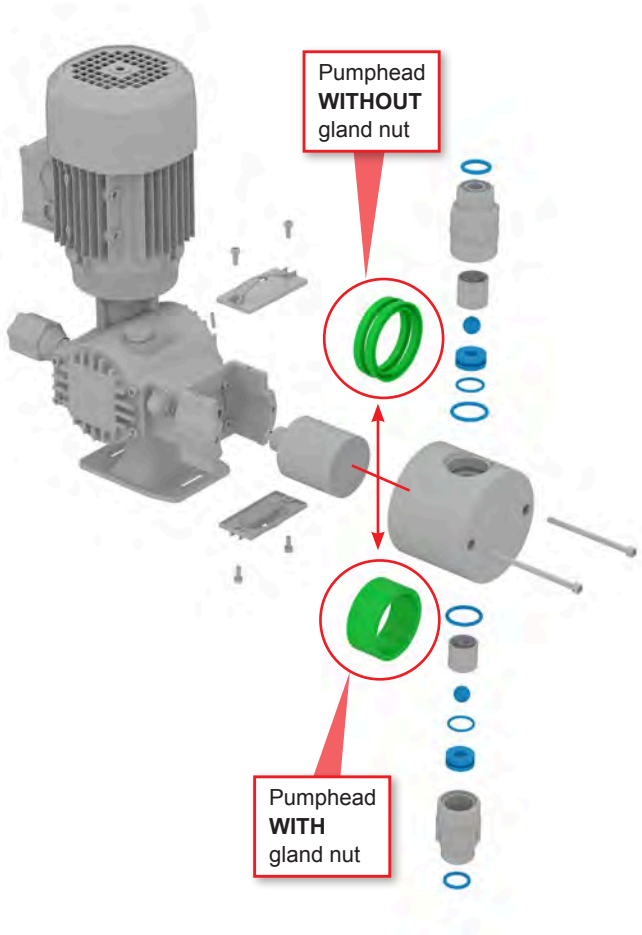
Increase Uptime !
Maximize your productivity with fewer repairs.

Save Time and Money !
Ordering and Repairs made easy.

M PUMPS



R PUMPS



KOPKIT LIGHTS

- O-RINGS
- VALVE SEAT
- CHECK VALVE (BALL)

KOPKIT FULL

- KOPKIT LIGHTS
- DIAPHRAGM
- SLIDE GASKET

KOPKIT LIGHTS

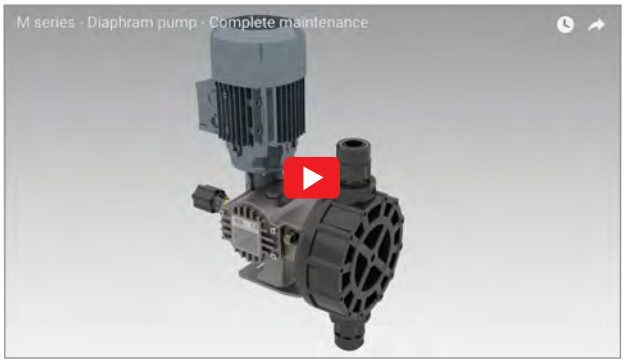
- O-RINGS
- VALVE SEAT
- CHECK VALVE (BALL)

KOPKIT FULL

- KOPKIT LIGHTS
- PLUNGER PACKING

http://oblblackline.com

M - Maintenance Video

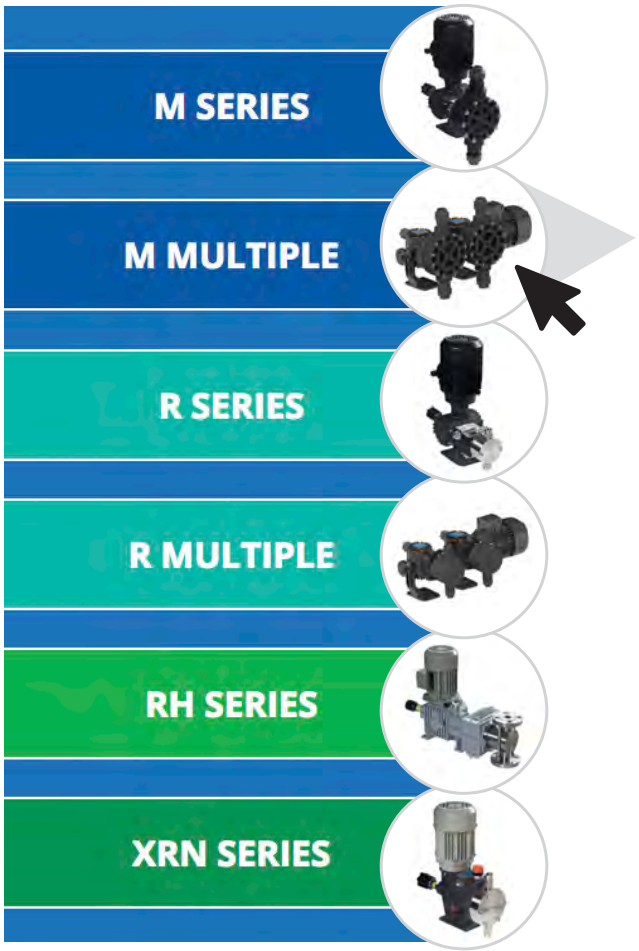


Maintenance video to offer a proper step by step guidance procedures to bring your Mechanical Diaphragm pump back to as new state.

R - Maintenance Video

Maintenance video to offer a proper step by step guidance procedures to bring your Plunger pump back to as new state.

Characteristics



M MULTIPLE

1

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

Compelling features of OBL pumps to bring consistent benefit to show how Blackline is instrumental to keep process safe and dependable over time.

Notes

oblblackline.com

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IDEX