

blackline
an OBL brand



**PLUNGER AND DIAPHRAGM
METERING PUMPS**



blackline pro
an OBL brand

GENERAL CATALOGUE



OBL
METERING PUMPS

IBEX



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.

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

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

ROBUST

NEW DESIGN

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

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.



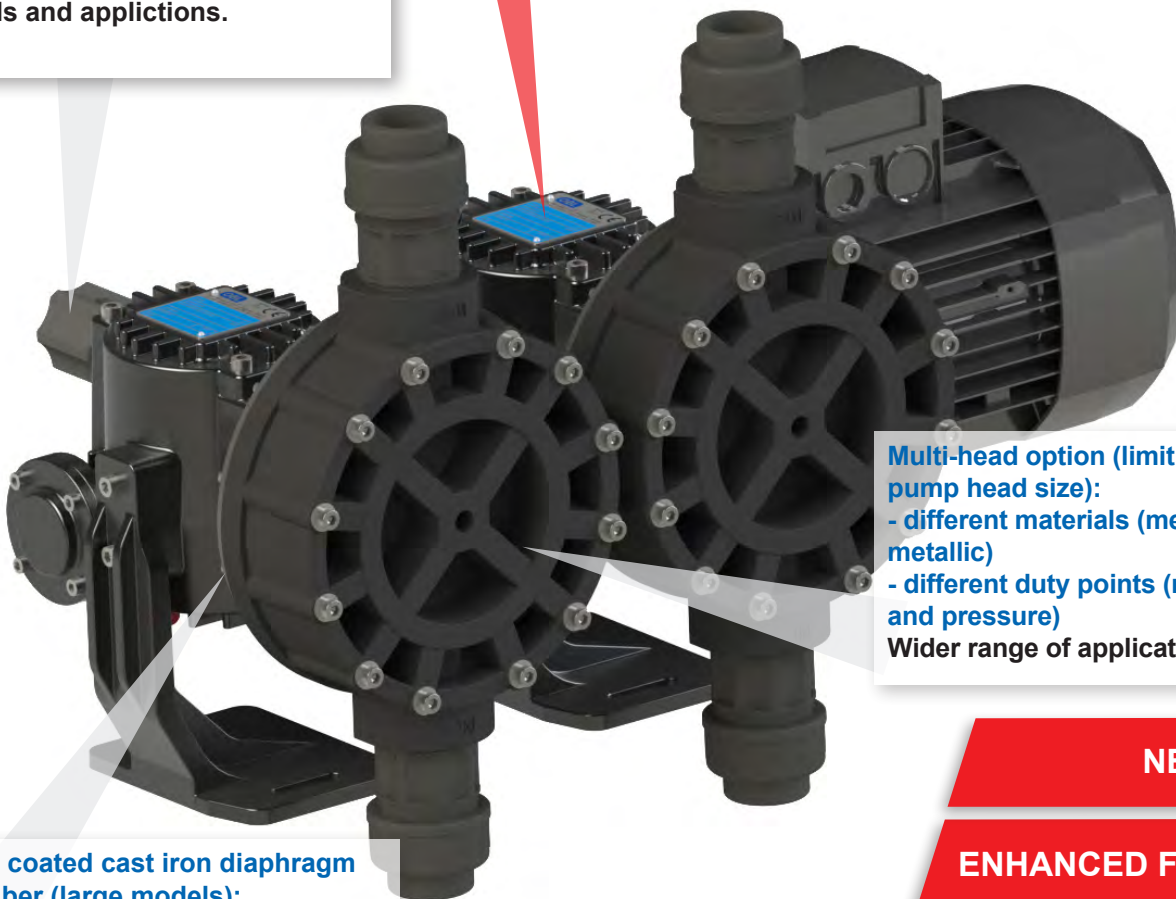
Individual gearbox reducer for each pumphead:
Now you can have pumpheads with different S.P.M.
Enhanced flexibility.

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 applications.



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.

ATEX

i

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

NEW DESIGN

ENHANCED FLEXIBILITY

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



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.

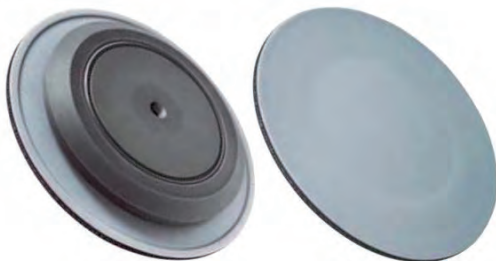
Diaphragm Structure

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.

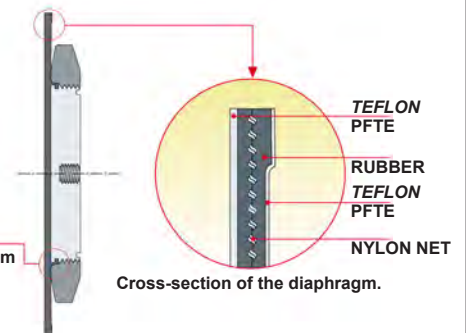
Reduces downtime and cleanup, "minimizing" chemical exposure.



METALLIC SUPPORT

RUBBER

Detail of the bonding between diaphragm and metallic support.



Cross-section of the diaphragm.

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.

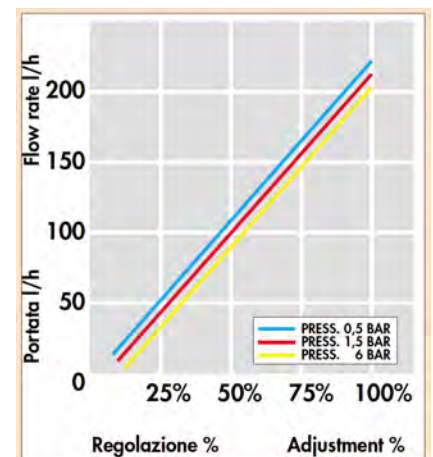
FEATURES & BENEFITS

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 Addition



- 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).

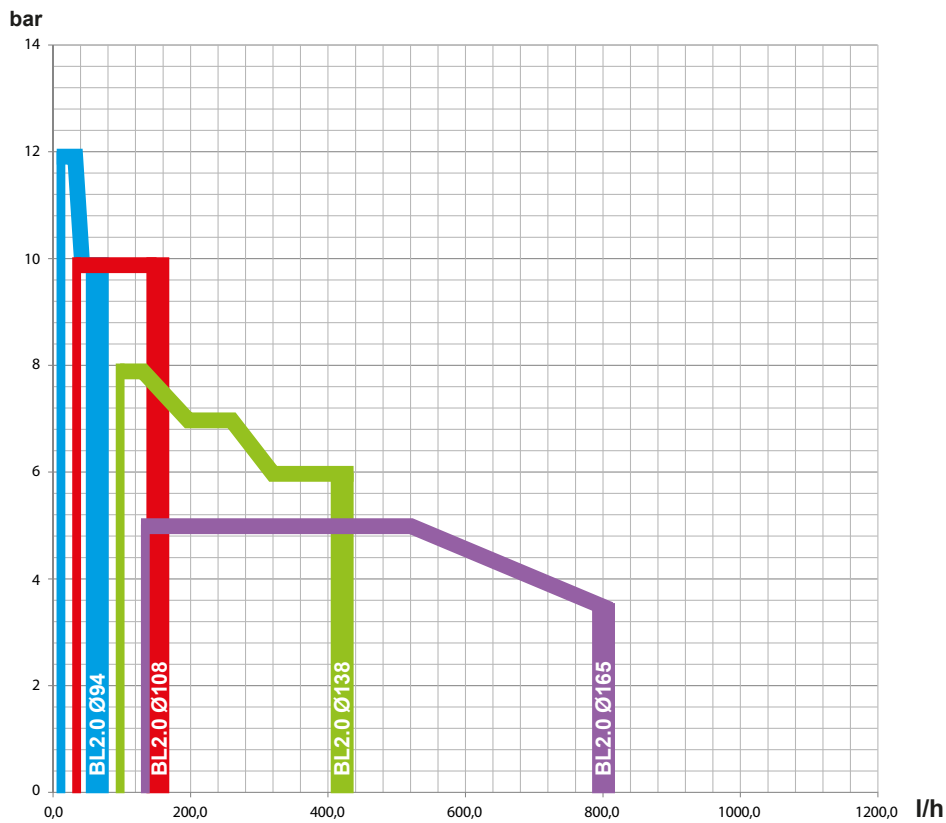
► Technical data

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	36	11	M 14	43	14	12	12
	M 16	50	16	M 19	60	19		
	M 23	70	23					
	M 31	95	31	M 28	84	28	10	10
	M 37	115	37	M 36	114	36		
	M 50	155	50	M 45	138	45		
4 108	M 35	36	35	M 42	43	42	10	10
	M 49	50	49	M 58	60	58		
	M 75	70	75	M 90	84	90		
	M 101	95	101					
	M 120	115	120	M 118	114	118		
	M 155	155	155	M 145	138	145		
6 138	"M 102 M 131"	36 50"	100 132	M 119	43	120	8	8
	M 201	70	197	M 158	"60	158	7	7
	M 261	95	260	M 236	84	236		
	M 321	115	320	M 312	114	312	6	6
	M 421	155	420	M 384	138	384		
	6 165	M 150	36	150	M 180	43	"65	5
M 190		50	200	M 228	60	228		
M 301		70	300"	M 360	84	350		
M 431		95	435	M 519	114	515		
M 521		115	520				3,5	3,5
M 660		155	660	M 620	138	515		
M 800		155	800	-	-	-		

► Material of construction

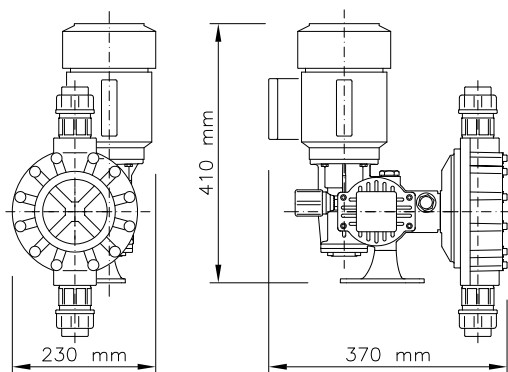
COMPONENTS	A	A1121	A32	PP (PP6)	PP11	PP32	S562
PUMP HEAD	AISI-316L	AISI-316L	AISI-316L	PP	PP	PP	PVDF
DIAPHRAGM	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
VALVE GUIDE	PP	AISI-316L	AISI-316L	PP	PP	PP	PVDF
VALVE SEAT	AISI-316L	AISI-316L	INCOLOY-825	PVC	AISI-316L	INCOLOY-825	PTFE
VALVE (BALL)	AISI-316L	AISI-316L	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**

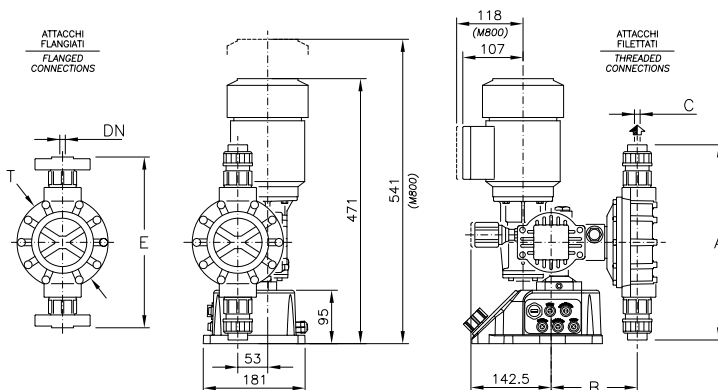


► **Overall dimensions**

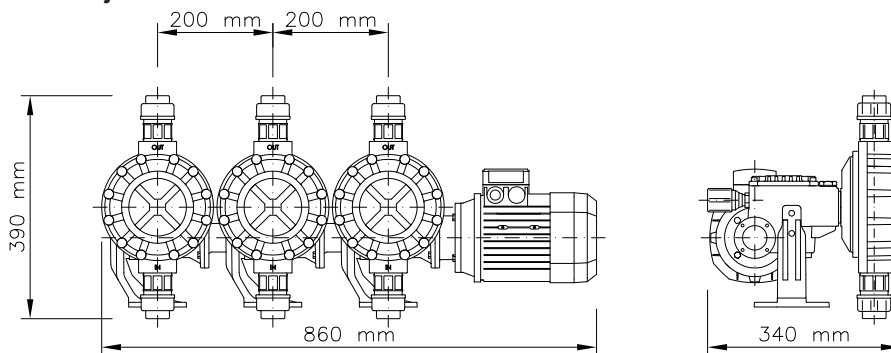
SINGLE PUMP - Manual Adjustment



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.

Spring return mechanism with oversized bearing.

Extends pump life and lowers life-cycle cost.

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.

Double check valves standard on models with flowrates up to 18 l/h, optional on flows up to 150 l/h.

Increased accuracy when operating at low flow.

Wider range of applications.

ROBUST

NEW DESIGN

ATEX

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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.

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.

NEW DESIGN

ENHANCED FLEXIBILITY

ATEX



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

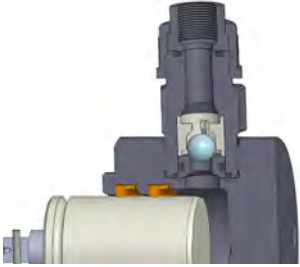
Duplex unit with manifolds: for flowrates up to 600 l/h



Sectional view

THREADED CONNECTIONS

P PVC

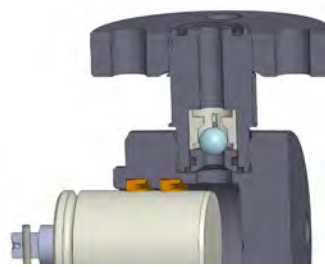


A AISI-316L

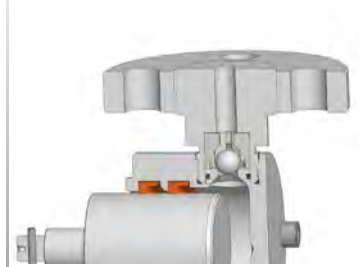


FLANGED CONNECTIONS

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.

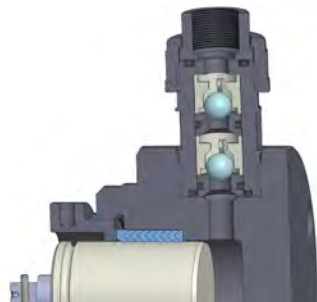
Suitable for fluid temperatures up to +40°C for all seal types.

Plunger lip seals (OBL design) are non adjustable.
Maximum working pressure up to 10 barg.

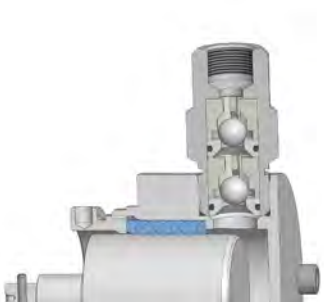
Sectional view

THREADED CONNECTIONS

P PVC

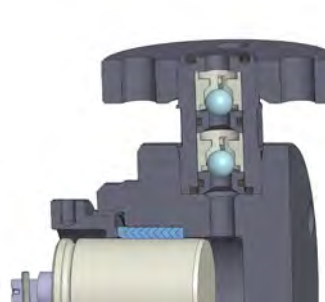


A AISI-316L

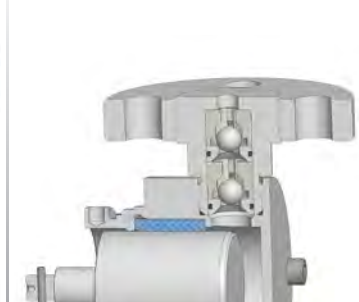


FLANGED CONNECTIONS

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.

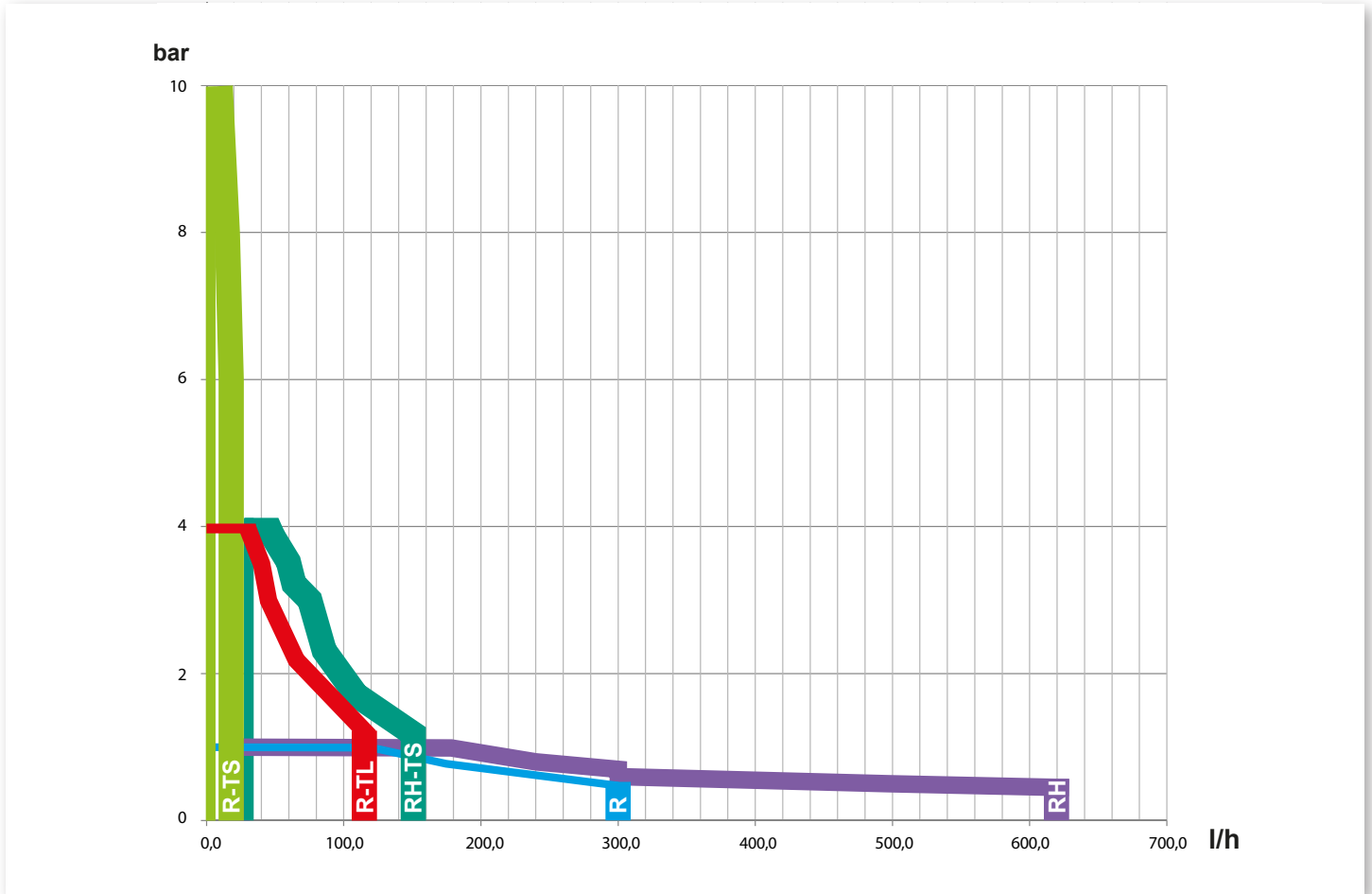
Technical data

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			
					A	A-TL	P	THREADED		FLANGED			A	P	A	P	3ph	1ph
R 6	50	0,8	43	0,7	/	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	
	70	1,2	60	1														
	95	1,8	84	1,5														
	115	2,2	114	2,2														
R 10	36	2	30	1,6	10	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	
	50	3	43	2,5														
	70	4	60	3,4														
	95	5,5	84	4,8														
R 16	36	5	43	6	10	40	10	3/8" BSP f	3/8" BSP f	DN 15 - 1/2" ANSI	DN 15 - 1/2" ANSI	10	10	3/8" BSP f	3/8" BSP f	0,25 kW NO TL	0,37 kW	
	50	7	60	9,5														
	70	11	84	13														
	95	15	114	18														
R 25	36	15	43	16	10	40	10	3/8" BSP f	3/8" BSP f	DN 15 - 1/2" ANSI	DN 15 - 1/2" ANSI	10	10	3/8" BSP f	3/8" BSP f	0,25 kW NO TL	0,37 kW	
	50	20	60	24														
	70	30	84	33														
	95	38	114	45														
R 30	36	20	43	24	10	40	10	3/8" BSP f	3/8" BSP f	DN 15 - 1/2" ANSI	DN 15 - 1/2" ANSI	10	10	3/8" BSP f	3/8" BSP f	0,25 kW NO TL	0,37 kW	
	50	30	60	34														
	70	40	84	48														
	95	55	114	65														
R 43	36	40	43	50	10	12	10	3/8" BSP f	3/8" BSP f	DN 15 - 1/2" ANSI	DN 15 - 1/2" ANSI	10	10	3/8" BSP f	3/8" BSP f	0,25 kW NO TL	0,37 kW	
	50	55	60	78														
	70	90	84	100														
	95	115	114	150														
R 50	36	58	43	70	10	/	10	1/2" BSP f	1/2" BSP f	DN 15 - 1/2" ANSI	DN 15 - 1/2" ANSI	10	10	1/2" BSP f	1/2" BSP f	0,37 kW	0,37 kW	
	50	80	60	102														
	70	120	84	140														
	95	160	114	200														
R 62 ◆	36	90	43	105	10	/	10	3/4" BSP f	3/4" BSP f	DN 20 - 3/4" ANSI	DN 20 - 3/4" ANSI	8	8	1/2" BSP f	1/2" BSP f	0,37 kW	0,37 kW	
	50	125	60	152														
	70	175	84	205														
	95	250	114	300														

Material of construction

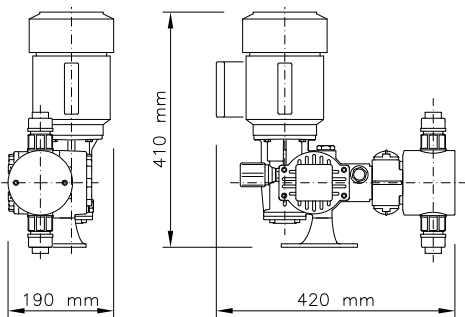
PUMPHEAD WITH GLAND NUT					
COMPONENTS	A	A-TL	P	P11	AC
PUMP HEAD	AISI-316L	AISI-316L	PVC	PVC	AISI-316L
PLUNGER	AISI-316L	AISI-316L	CERAMIC	CERAMIC	CERAMIC
PLUNGER PACKING	PTFE	PTFE	PTFE	PTFE	PTFE
VALVE GUIDE	PP/AISI-316L ◆	AISI-316L	PP	PP	AISI-316L
VALVE SEAT	AISI-316L	AISI-316L	● CERAMIC/PVC	AISI-316L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

► Performance

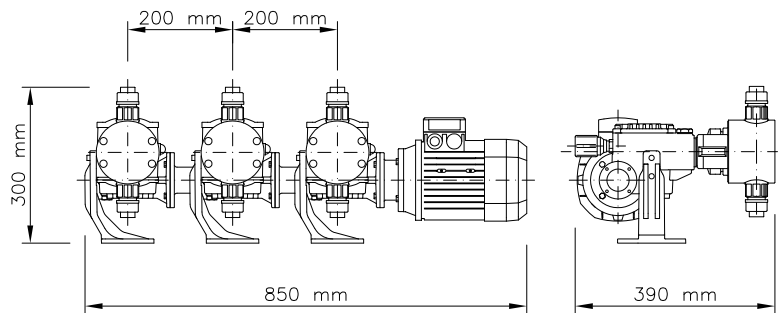


► Overall dimensions

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	2	30	1,6	10	1/2" BSP f	0,25 kW	0,25 kW
	50	3	43	2,6				
R 16	36	4	30	3,3				
	50	6	43	5,2				
R 25	36	12	30	10				
	50	16	43	14				
R 30	36	18	30	15				
	50	25	43	22				
R 43	36	42	30	35				
	50	50	43	44				
R 50	36	58	30	48				
	50	80	43	70				
R 62	36	90	30	75				
	50	120	43	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	2	43	2,4	100	3/8" NPT f	1/2" ANSI 600 RF
	50	2,8	60	3,4			
	70	4	84	4,8			
	95	5	114	6			
	115	6					
R 16 A TS	50	7	43	6			
	70	10	60	8,5			
	95	15	84	13			
	115	18	114	18			
				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	4	30	4,8	60	70	3/8" BSP m
	36	6	43	7,2			
	50	8,5	60	10,2			
R 25 MA OM	25	10	30	12	35	45	
	36	14	43	16,8			
	50	20	60	24	35	40	
R 30 MA OM	36	20	43	24	30	35	
	50	30	60	36			

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	90	10	1/2" BSP f
	95	115		
HR 50	70	120	10	1/2" BSP f
	95	160		

HR PUMPS (DIATOMACEOUS EARTH DOSING):

Typical 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



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):

Typical 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



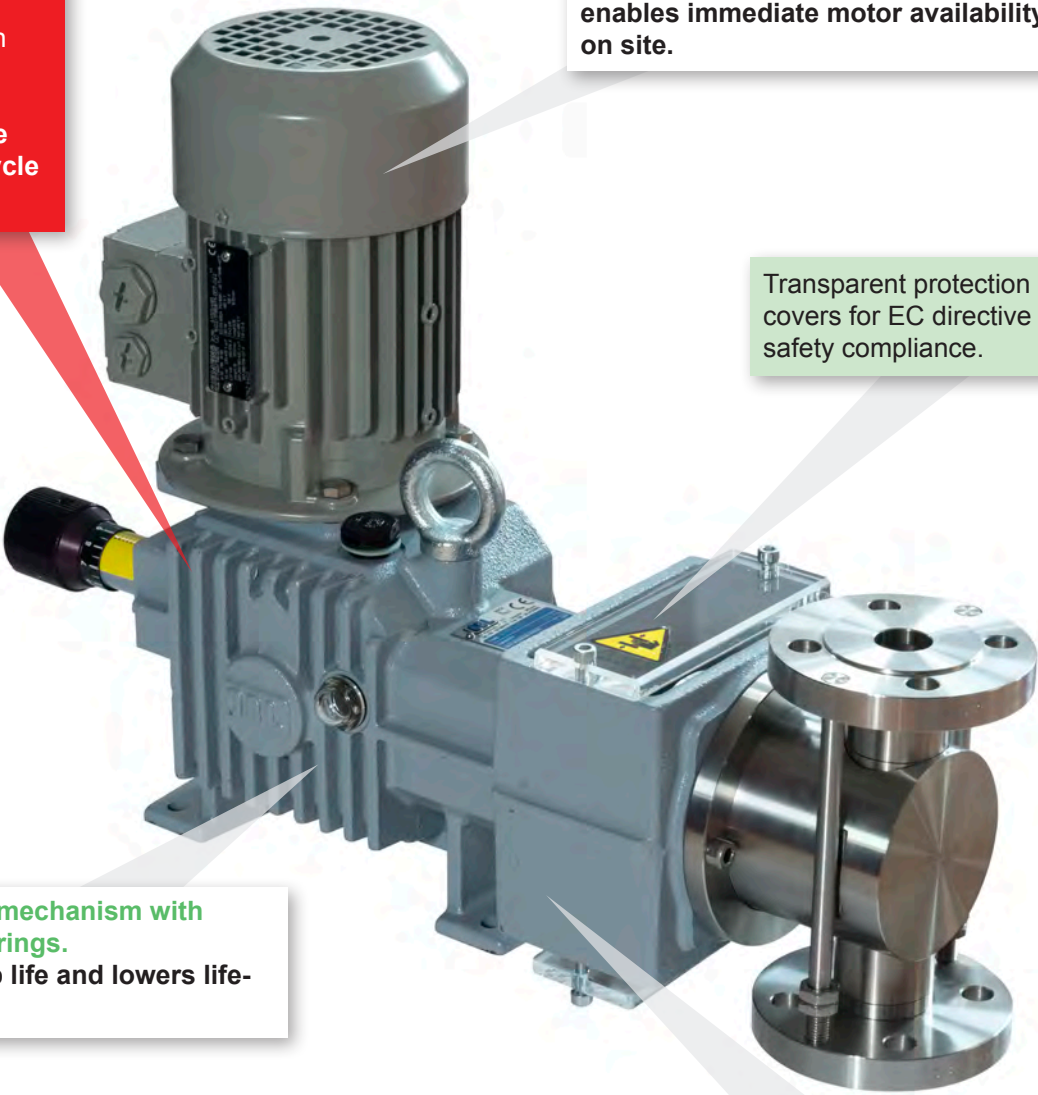
Painted cast iron casing:
Improved corrosion resistance against aggressive fumes. Extends pump life and lowers life-cycle cost.

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
i 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

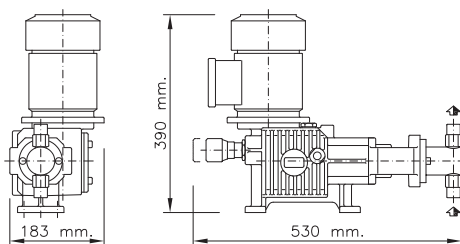
TYPE	50 Hz		60 Hz		MAX PRESS. bar				CONNECTIONS		
	STROKES / 1	MAX FLOW RATE l/h	STROKES / 1	MAX FLOW RATE l/h	A	A+M	A-TL	P	THR.		
									BSP f	UNI	ANSI
RH 25	42	29	50	34	/	/	40	/	3/8"	DN 15	1/2"
	63	44	75	52			40				
	86	60	98	70			35				
	104	75	-	-			30				
RH 30	42	42	50	50	/	/	35	/	3/8"	DN 15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

► Material of construction

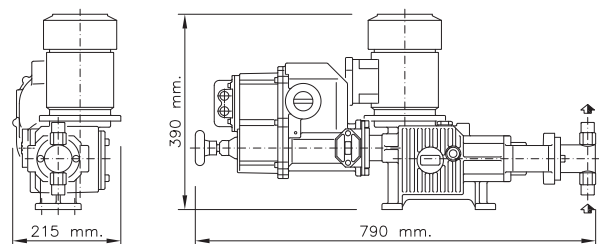
COMPONENTS	A (A+M)	A-TL	P
PUMP HEAD	AISI-316L	AISI-316L	PVC
PLUNGER	AISI-316L	AISI-316L	CERAMIC
PLUNGER PACKING	PTFE	PTFE	PTFE
VALVE GUIDE	AISI-316L	AISI-316L	PVC
VALVE SEAT	AISI-316L	AISI-316L	PVC
VALVE (BALL)	AISI-316L	AISI-316L	PYREX
VALVE SEAL	FPM	FPM	FPM

► Overall dimensions

SINGLE PUMP - Manual Adjustment

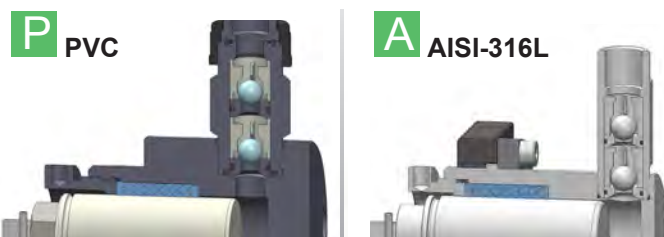


SINGLE PUMP - Electric Actuator Adjustment



► Sectional view

THREADED CONNECTIONS



FLANGED CONNECTIONS



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 valves 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:

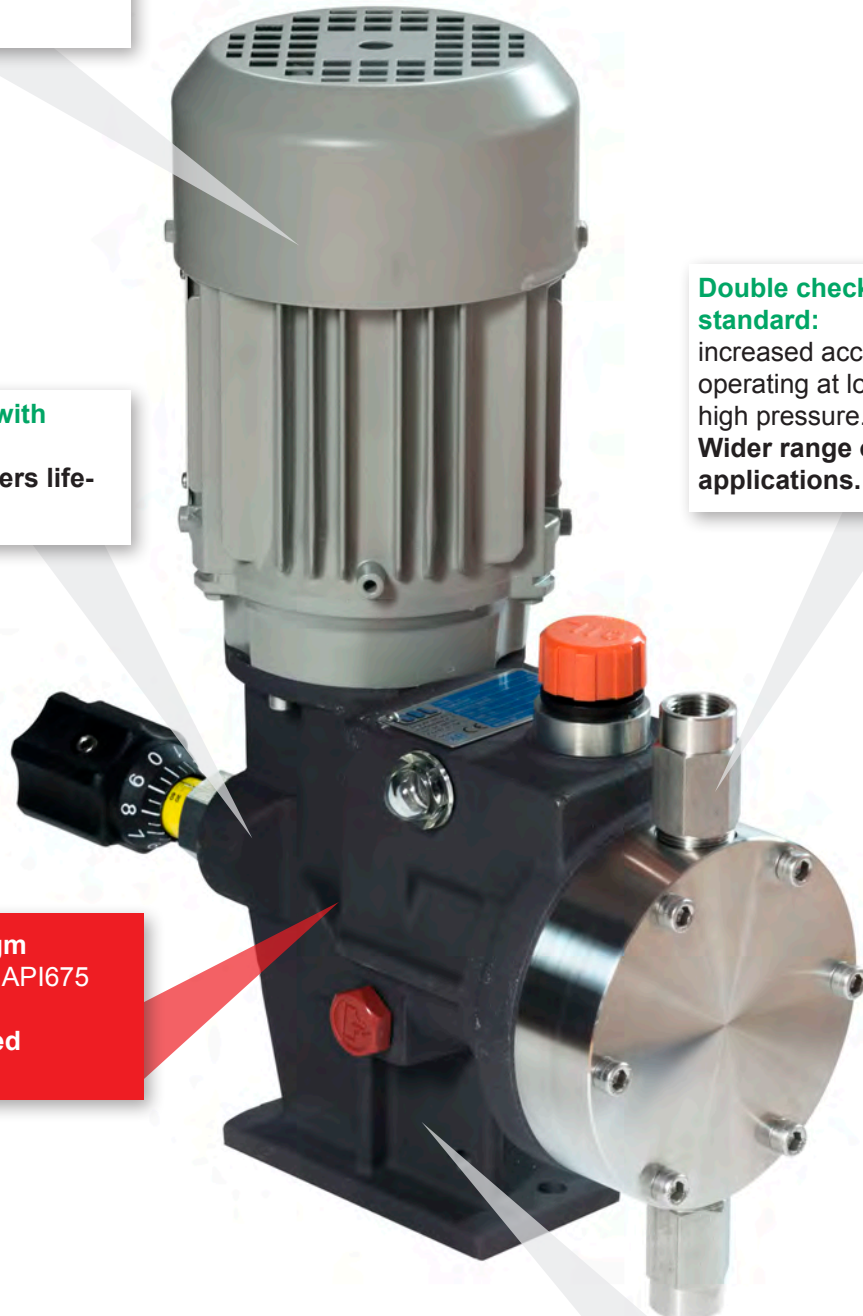
improved corrosion resistance against aggressive fumes.

Extends pump life and lowers life-cycle cost.

ATEX

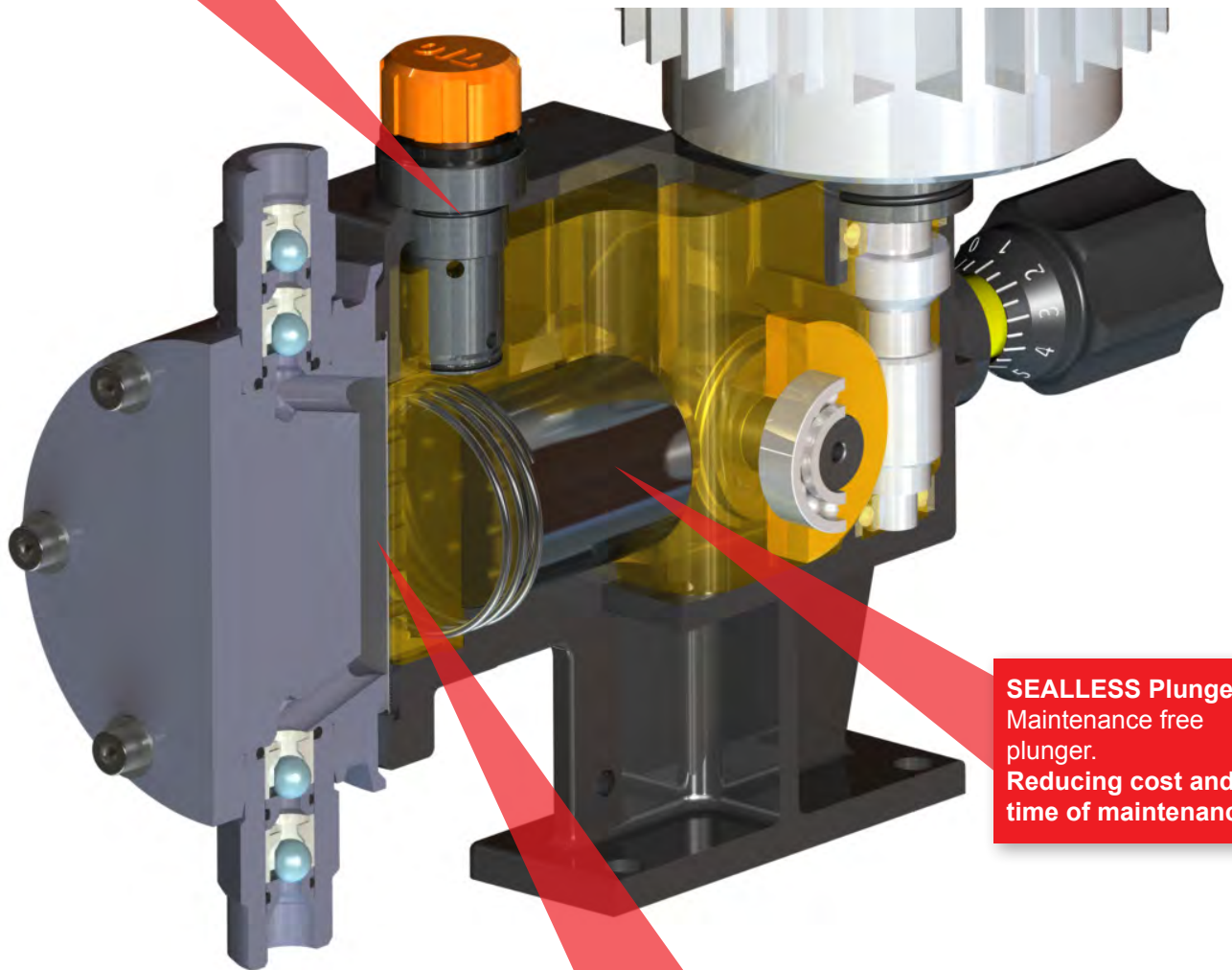


ALL models comply with ATEX (2014/34/CE) Group II, Category 2 (zone 1/21) and Group II, Category 3 (zone 2/22).



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

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

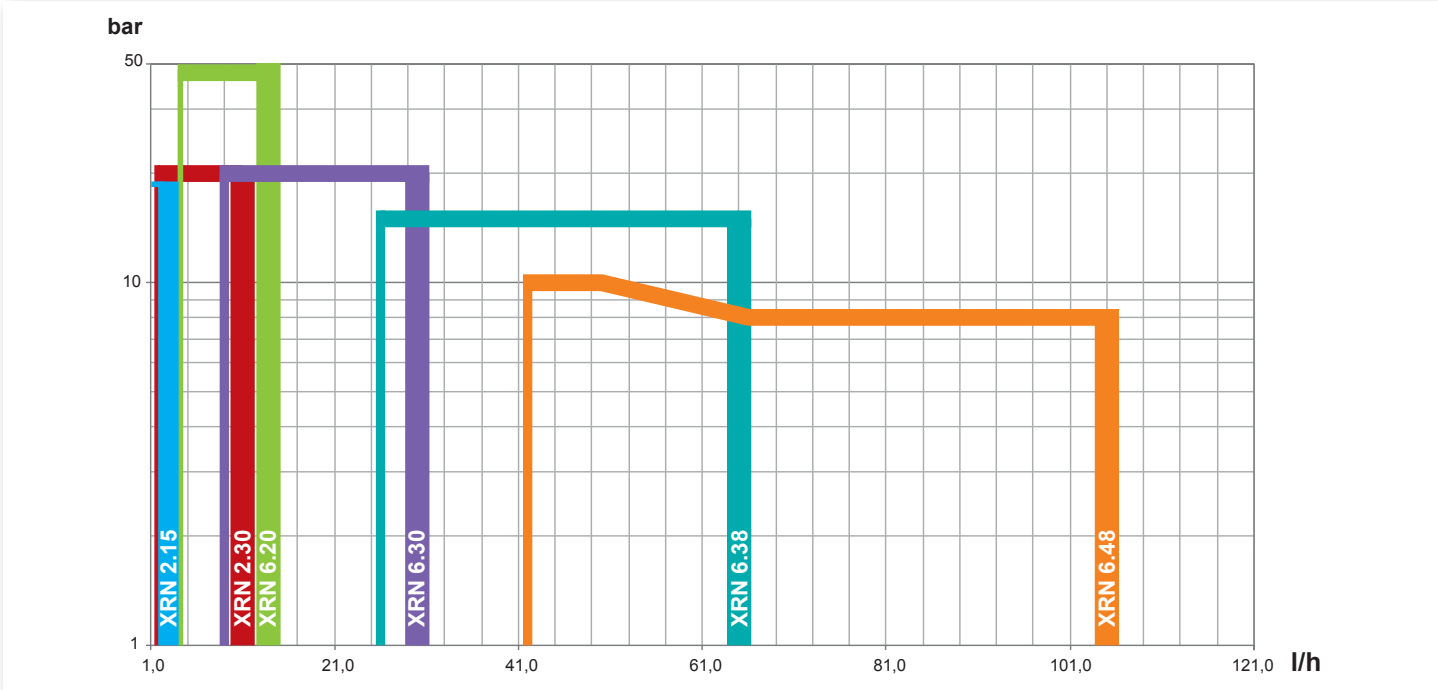
► Technical data

TYPE	50 Hz		60 Hz		MAX PRESS. bar		BUILT-IN RELIEF VALVE SET PRESS. (PSV) bar	
	STROKES / 1	MAX FLOW RATE l/h	STROKES / 1	MAX FLOW RATE l/h	①			
					A	P - S	PSV SET PRESS. bar	MAX WORK. PRESS. bar
XRN 2.15	55	0,6	67	0,8	20	13	5	4
	72	0,9	87	1				
	85	1,2	103	1,2				
	111	1,5	133	1,6				
	145	2						
XRN 2.30	28	1,8	33	2,1	20	13	7	5,5
	36	2,5	43	2,8				
	55	3,8	67	4,5				
	72	5	87	6				
	85	5,8	103	7				
	111	7,5	133	10				
	145	11						
XRN 6.20	28	2	33	2,5	40	/	10	8,5
	36	2,8	43	3,5				
	55	4,5	67	5,5				
	72	6	87	7,2				
	85	7,3	103	9				
	111	10	133	12				
	145	13						
XRN 6.30	55	10	67	14	20	13	15	17
	72	14	87	20				
	85	20	103	24				
	111	23	133	30				
	145	30						
XRN 6.38	72	26	67	24	15	13	20	20
	85	32	87	33				
	111	42	103	40				
	145	54	133	50				
	170	65	174	68				
XRN 6.48	72	42	67	38	10	10	30	25
	85	50	87	50	10	10		
	111	66	103	62	8	8		
	145	87	133	80	8	8		
	170	105	174	105	8	8		

► Material of construction

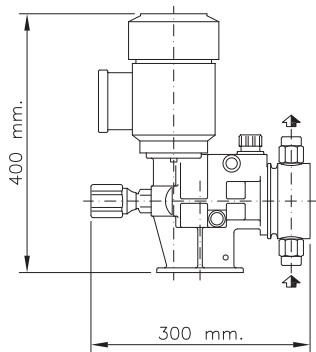
COMPONENTS	A	A32	P	P11	S
PUMP HEAD	AISI-316L	AISI-316L	PVC	PVC	PVC
DIAPHRAGM	PTFE	PTFE	PTFE	PTFE	PTFE
VALVE GUIDE	PP	PP	PP	PP	PTFE
VALVE SEAT	AISI-316L	INCOLOY-825	PVC	AISI-316L	PVC
VALVE (BALL)	AISI-316L	HASTELLOY C-276	PYREX	AISI-316L	PVC
VALVE HOUSING	AISI-316L	AISI-316L	PVC	PVC	PYREX
VALVE SEAL	FPM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

► **Performance**

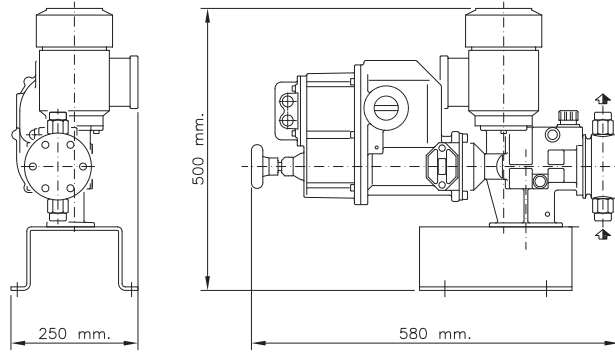


► **Overall dimensions**

SINGLE PUMP - Manual Adjustment



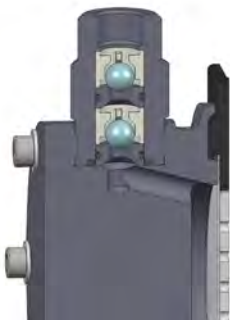
SINGLE PUMP - Electric Actuator Adjustment



► **Sectional view**

THREADED CONNECTIONS

P PVC

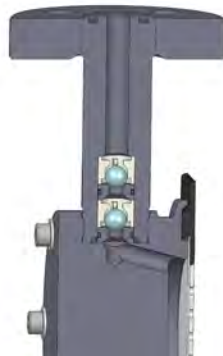


A AISI-316L



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.



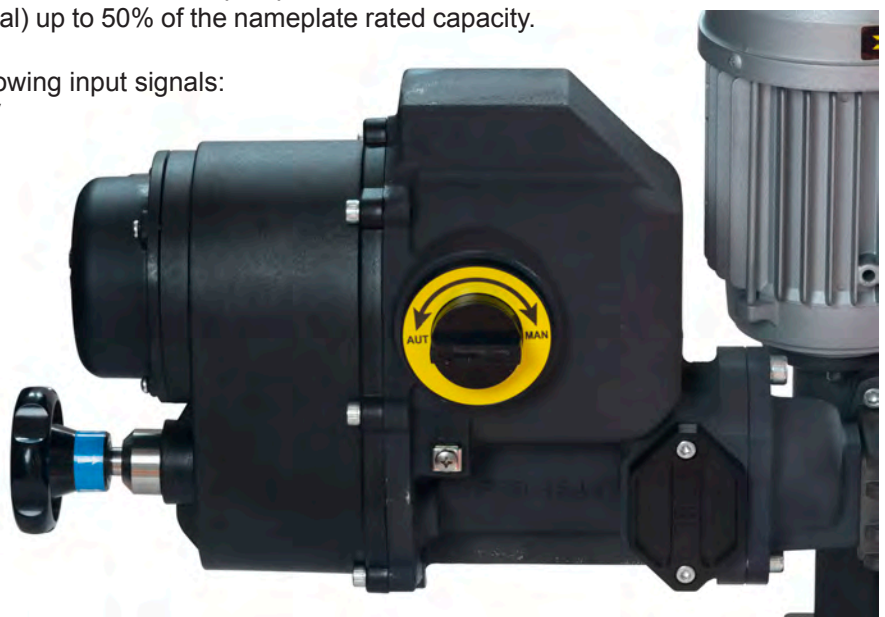
OBL Z type electric actuator, option available on all Blackline pump models M, R, XRN remotely controls the pumps flowrate via input signal.

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



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 !

Everything in One Place !

All of the parts you need to get running again.

Increase Uptime !

Maximize your productivity with fewer repairs.

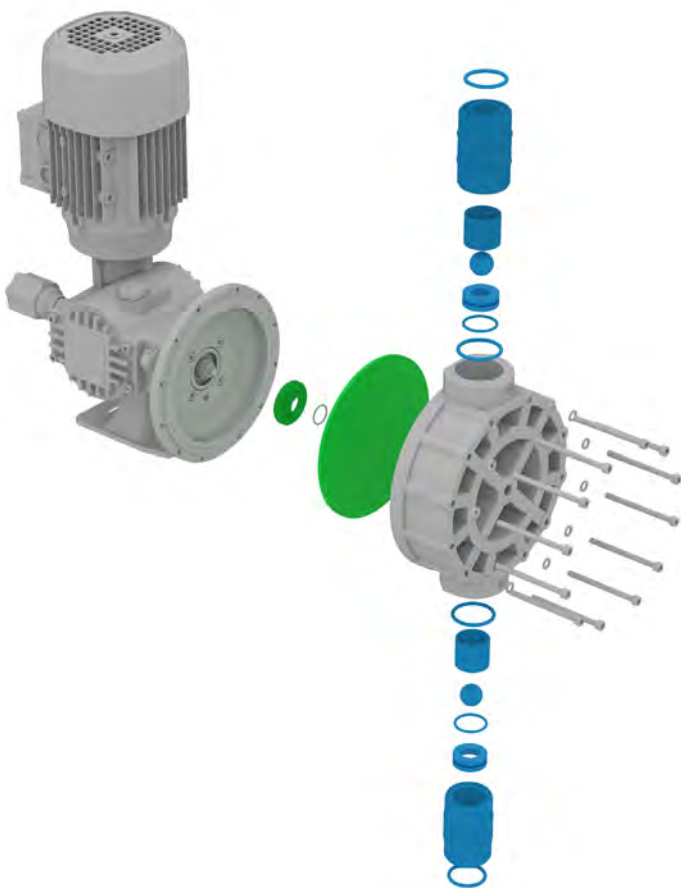
Reduce Frequency of Repairs !

Reliable replacement parts are guaranteed to last.

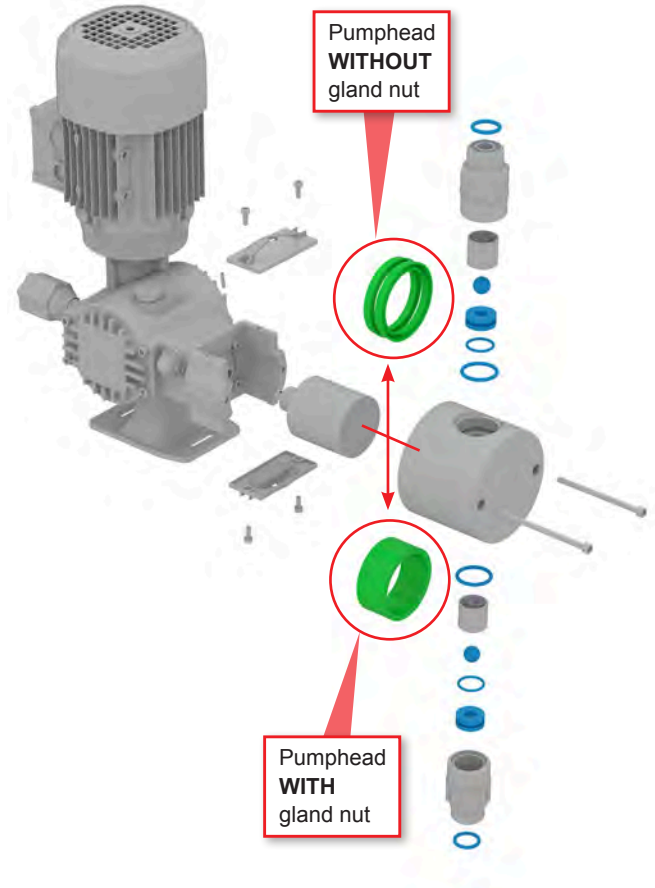
Save Time and Money !

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.



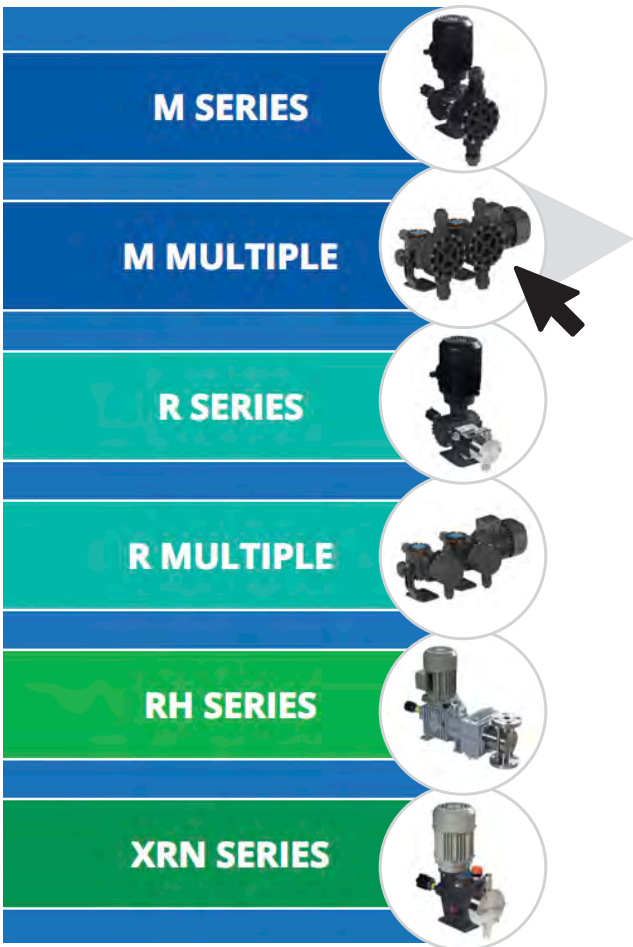
R - Maintenance Video



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.

oblblackline.com

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