

blackline

an OBL brand



WATER DIVISION



GENERAL CATALOGUE

M

ME

R

RH

XRN



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.



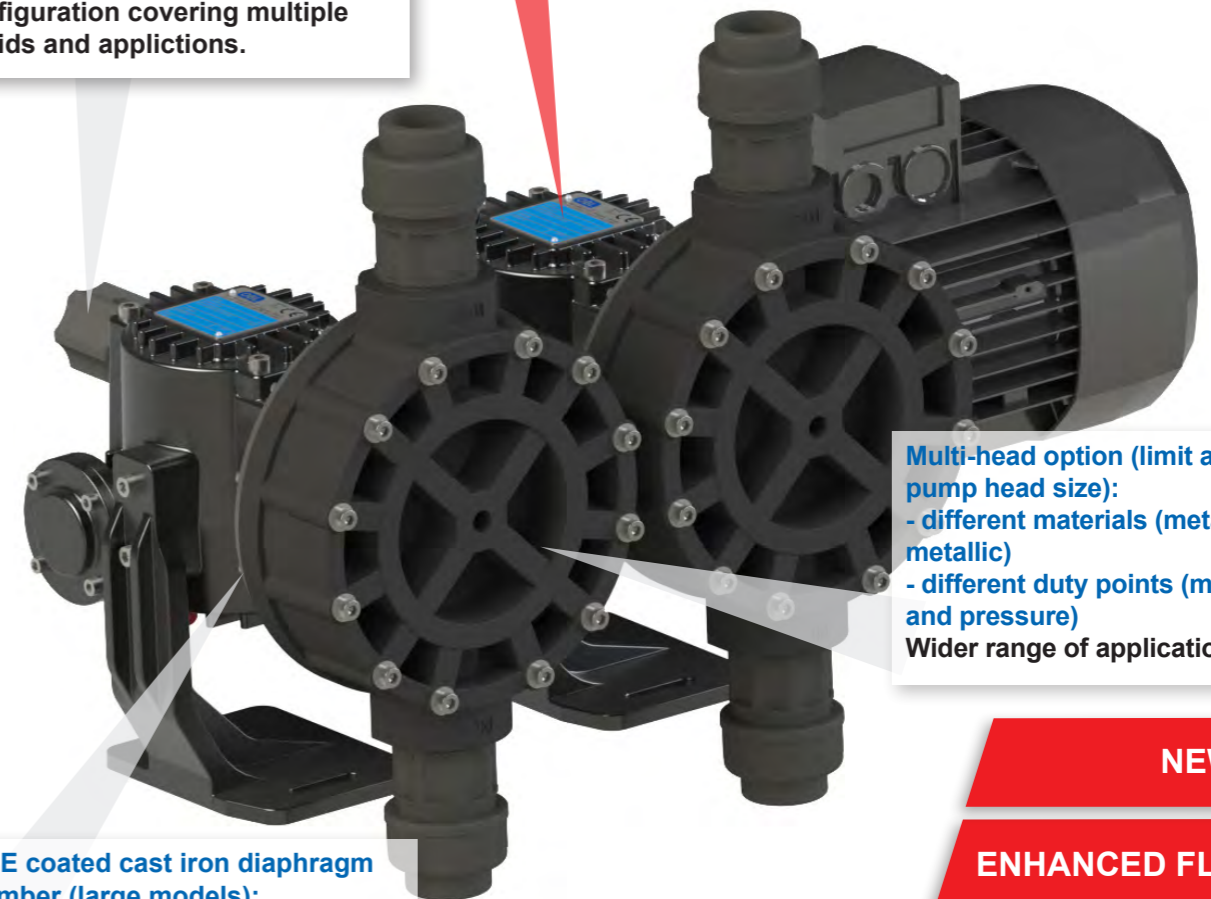
3pcs threaded connector (PP models), Metric or Inch standard:
BSP or NPT thread allows easy and simple connection to pipeline.
Reduces cost and time of installation and maintenance.

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

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

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 applications.

All possible combinations up to 10 pumpheads



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.

STURDIER

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.



ATEX

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

NEW DESIGN

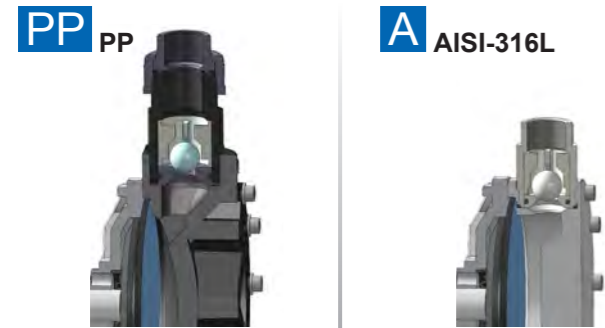
ENHANCED FLEXIBILITY

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

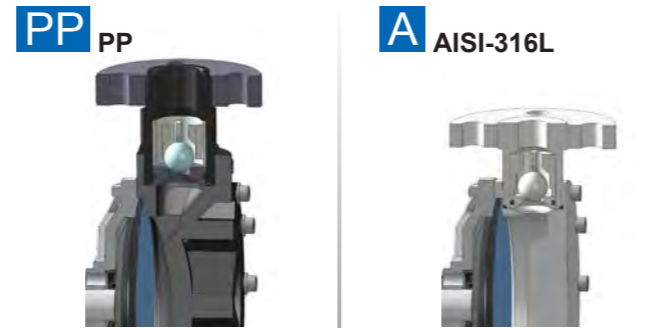


► Sectional view

THREADED CONNECTIONS



FLANGED CONNECTIONS



FEATURES & BENEFITS

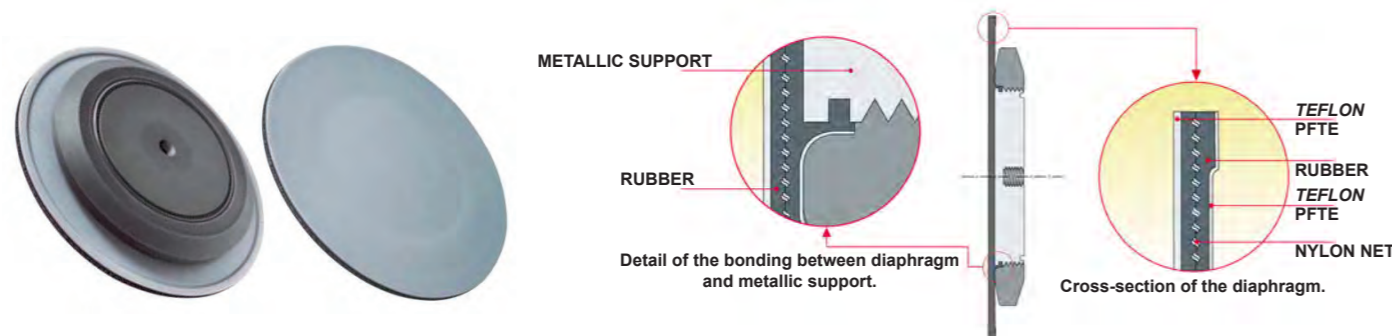
Valve & Seat material options: Ceramic, Stainless Steel, Incoloy-825, Hastelloy C-276.
 Increased performance when handling high density and viscous liquids as well as highly abrasive and aggressive fluids while minimizing cost impact.
Extends pump life and lowers life-cycle cost.

► 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.

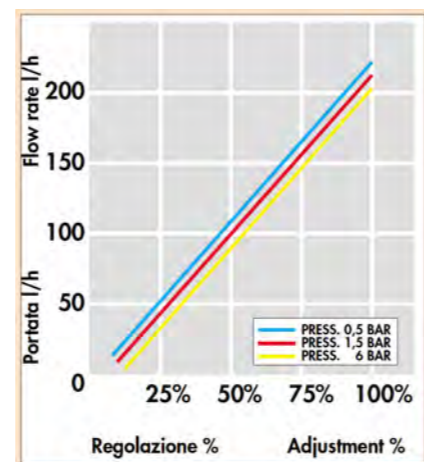


► Flowrate linearity

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 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).

PULP AND PAPER

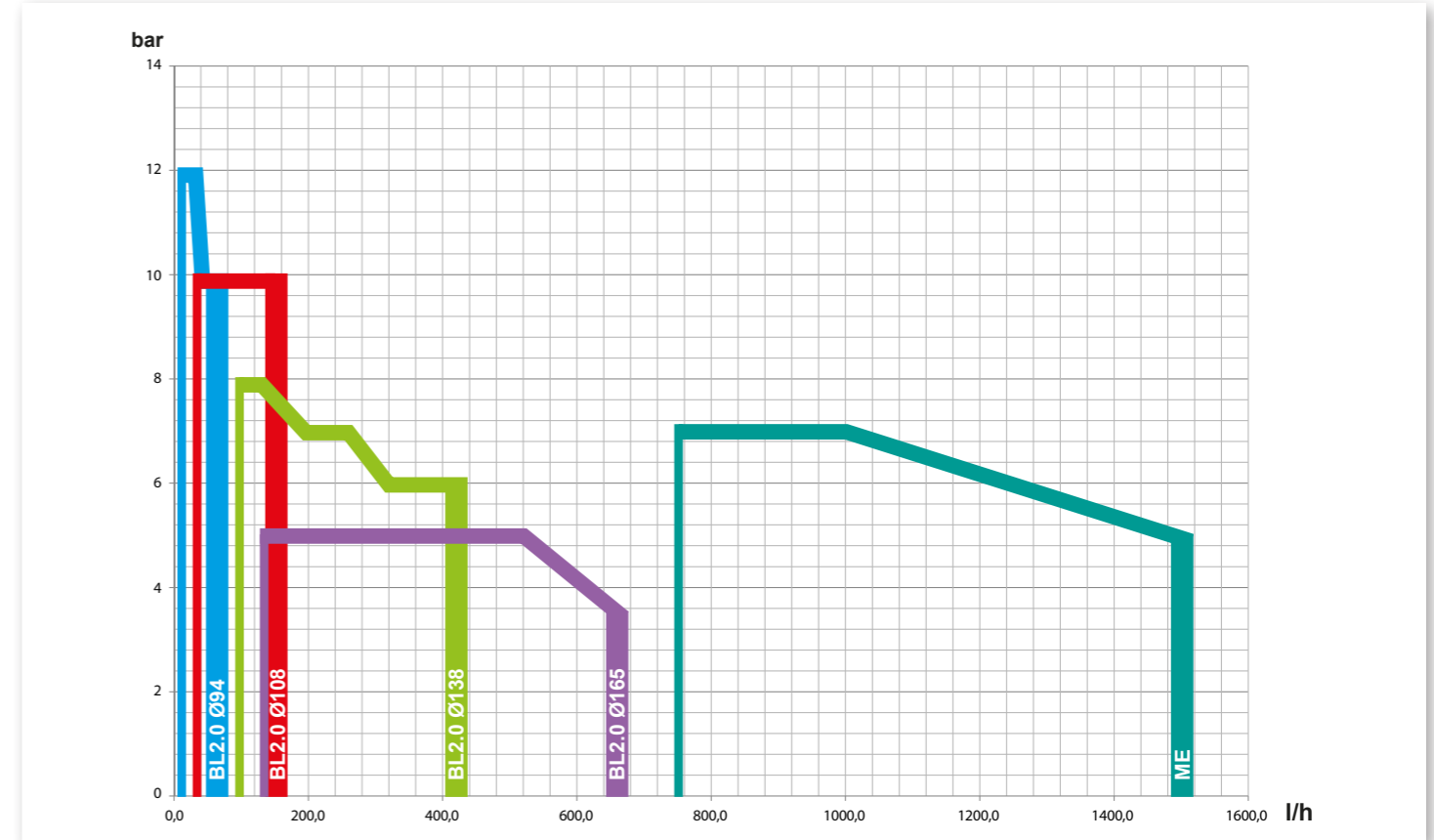


- Whitening and Bleaching process (Hydrogen Peroxide, Hypochlorite, Chlorine).
- Sizing (fillers, e.g. starch, polymers), Strengthening (Urea based chemicals, etc.), Pigmentation (dyes, pigments, etc).
- De-inking chemicals in recycling paper process (Sodium silicates, Sodium Hydroxide, Lime, Calcium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

Technical data

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 7	25	7	M 9	30	9	12	12
	M 11	36	11	M 14	43	14		
	M 16	50	16	M 19	60	19		
	M 23	70	23					
	M 31	95	31	M 28	84	28		
	M 37	115	37	M 36	114	36		
4 108	M 50	155	50	M 45	138	45	10	10
	M 35	36	35	M 42	43	42		
	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		
6 138	M 155	155	155	M 145	138	145	8	8
	M 102	36	100	M 119	43	120		
	M 131	50	132					
	M 201	70	197	M 158	60	158		
	M 261	95	260	M 236	84	236		
	M 321	115	320	M 312	114	312		
6 165	M 421	155	420	M 384	138	384	7	7
	M 150	36	150	M 180	43	165		
	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					
6 165	M 660	155	660	M 620	138	620	5	5
							3,5	3,5

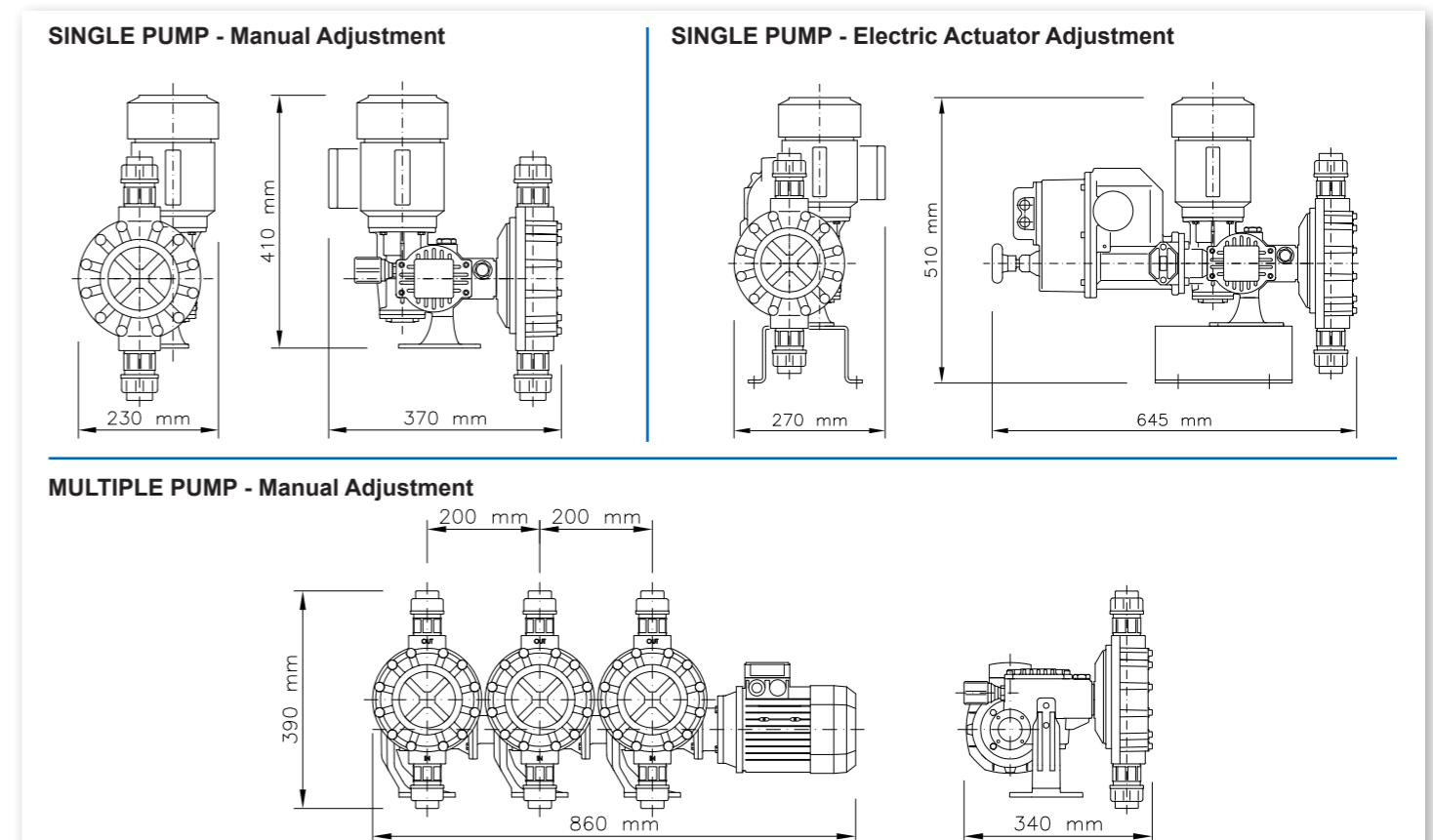
Performance



Material of construction

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

Overall dimensions



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.

Manual adjustment via handwheel and high resolution dial, or via electric stroke actuator as an option. Greater flexibility of applications

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

Increased number of pumphead locking screws (12 pcs). Reliable and effective sealing during operation.

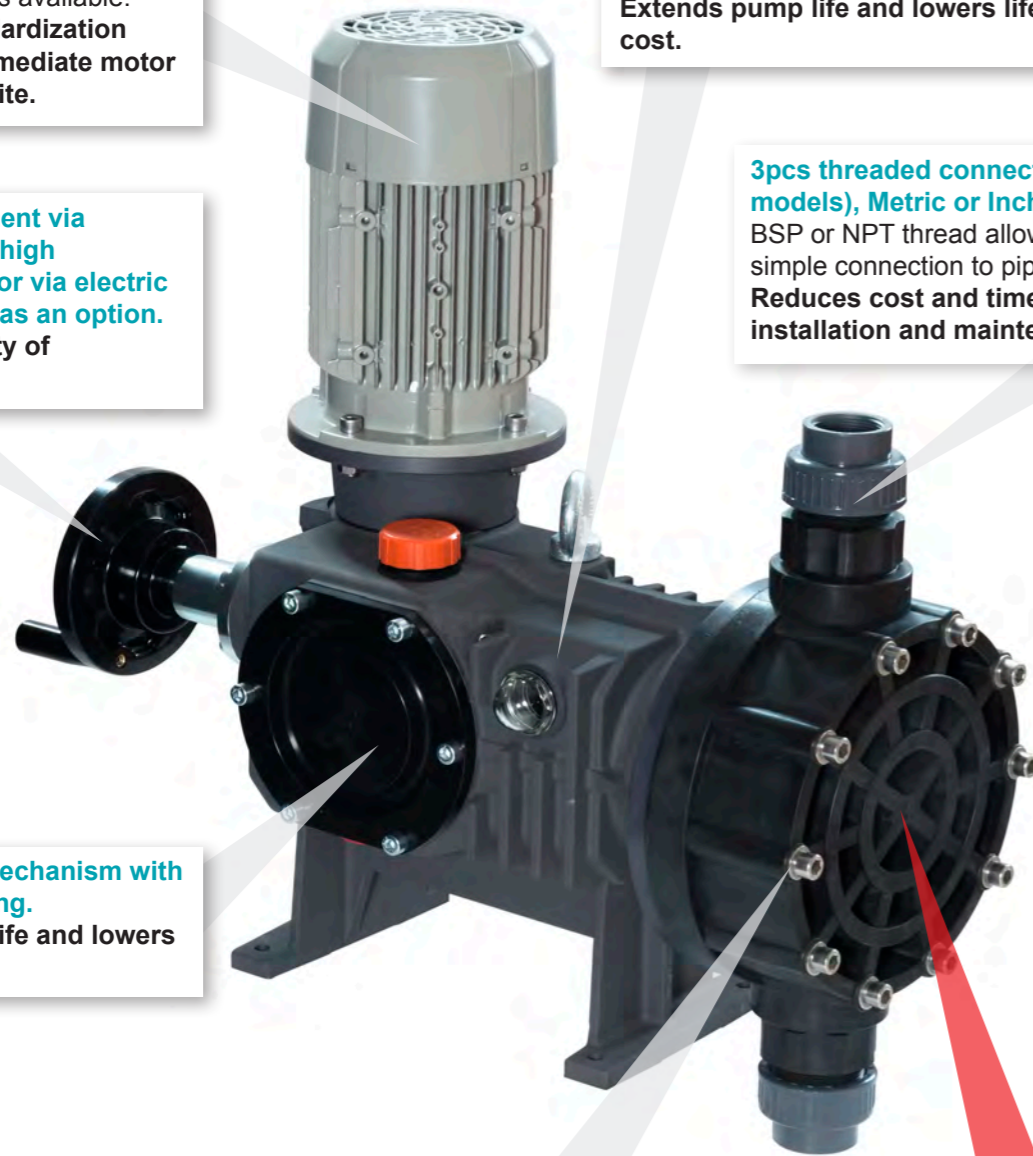
Anodized Aluminum Casing:

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

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.

1 Size diaphragm fits all, same valve and seat size on all models: Fewer parts to procure and keep on stock. Improved parts availability and lower cost of ownership.



Technical data

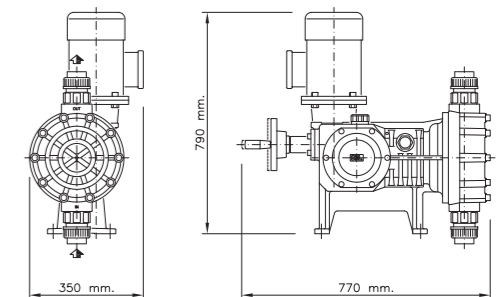
Ø DIAPH./STROKE	50 Hz			60 Hz			MAX PRESS. bar				CONNECTIONS					
	TYPE	STROKES / 1	MAX FLOW RATE l/h	TYPE	STROKES / 1	MAX FLOW RATE l/h	1,5 kW		2,2 kW		THREADED			FLANGED		
							WORK.	MAX	WORK.	MAX	A	P	PP	A	P	PP
10 239	ME 750	60	750	ME 600	48	600	5	6	6	7	/	/	1-1/2" BSP f	DN 40	DN 40	DN 40
	ME 1000	82	1000	ME 880	72	880	5	6	6	7				1-1/2" ANSI	2" ANSI	2" ANSI
	ME 1250	100	1250	ME 1200	96	1200	4	5	5	6						
	ME 1500	123	1500	ME 1475	121	1475	3	4	4	5						

Material of construction

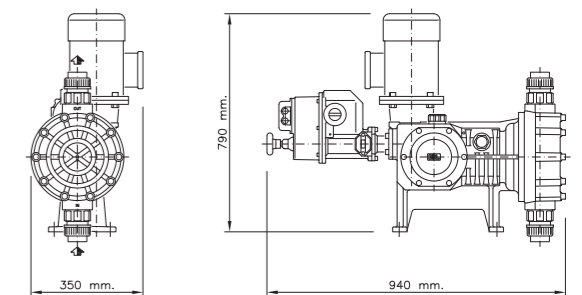
COMPONENTS	A	P	PP
PUMP HEAD	AISI-316L	PVC	PP
DIAPHRAGM	PTFE	PTFE	PTFE
VALVE GUIDE	AISI-316L	PP	PP
VALVE SEAT	AISI-316L	PVC	PVC
VALVE (BALL)	AISI-316L	PYREX	PYREX
VALVE HOUSING	-	PVC	PP
VALVE SEAL	FPM	FPM	FPM
FLANGE	AISI-316L	PVC	PVC

Overall dimensions

SINGLE PUMP - Manual Adjustment



SINGLE PUMP - Electric Actuator Adjustment



Sectional view

THREADED CONNECTION

PP PP



FLANGED CONNECTIONS

PP PP



P PVC



A AISI-316L



ATEX

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

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.



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.

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

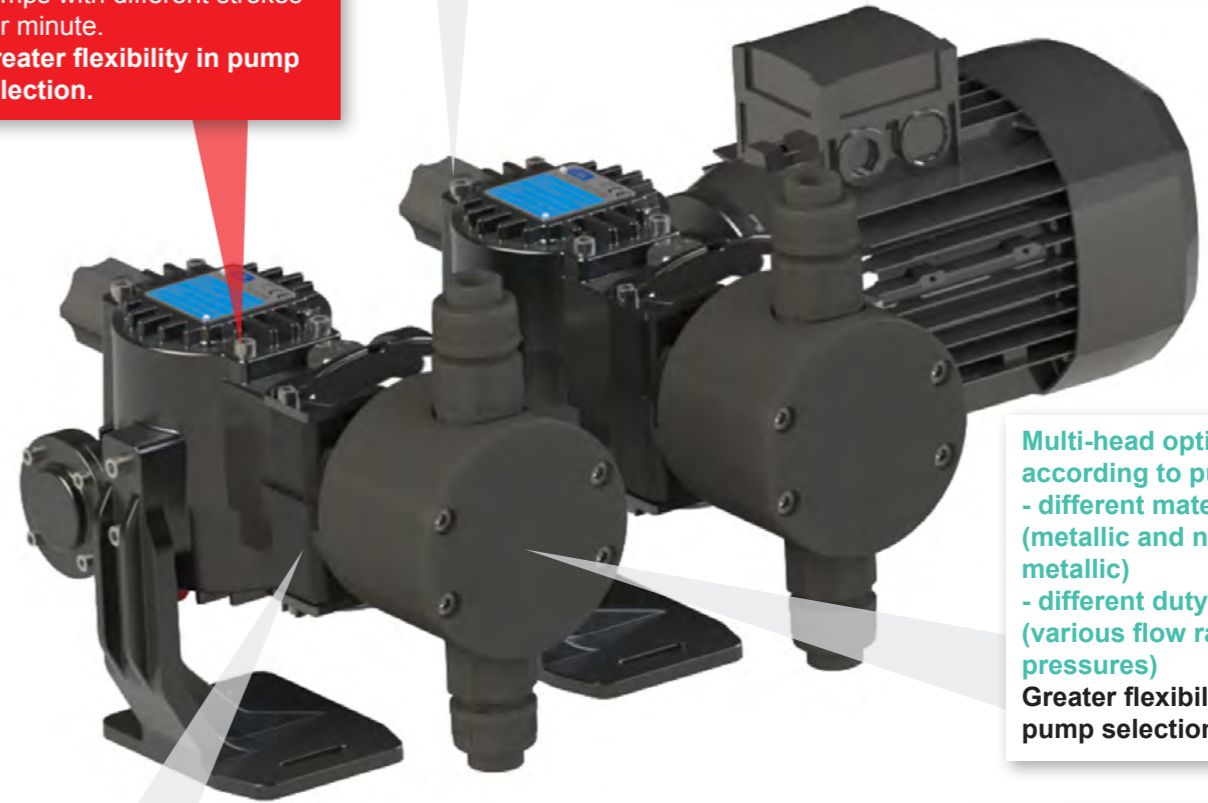
Individual gearbox for each pumphead:
Now you can have multiple pumps with different strokes per minute.
Greater flexibility in pump selection.

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.

All possible combinations up to 10 pumpheads.



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

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).

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).

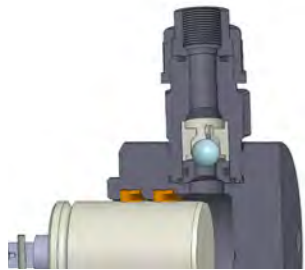
Duplex unit with manifolds: for flowrates up to 600 l/h



Sectional view

THREADED CONNECTIONS

P PVC

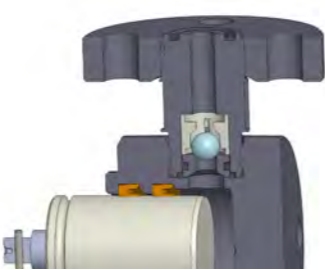


A AISI-316L



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.

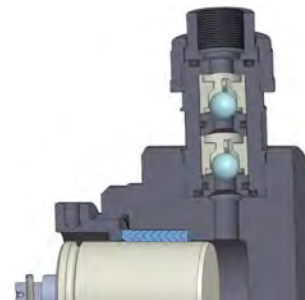
Plunger lip seals (OBL desing) are non adjustable.

Maximum working pressure up to 10 barg.

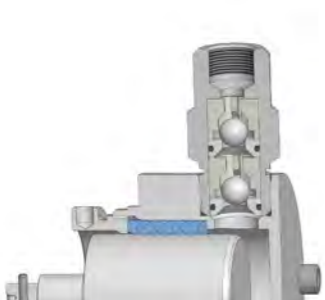
Sectional view

THREADED CONNECTIONS

P PVC

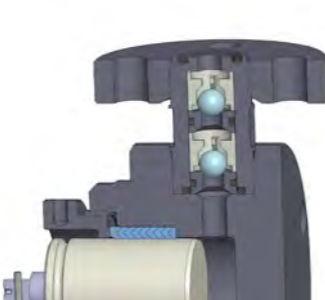


A AISI-316L

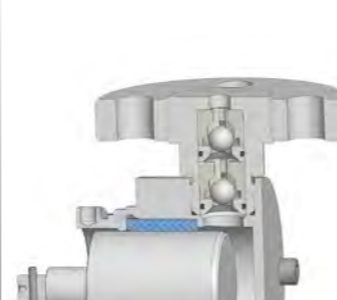


FLANGED CONNECTIONS

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.

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 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).

PULP AND PAPER

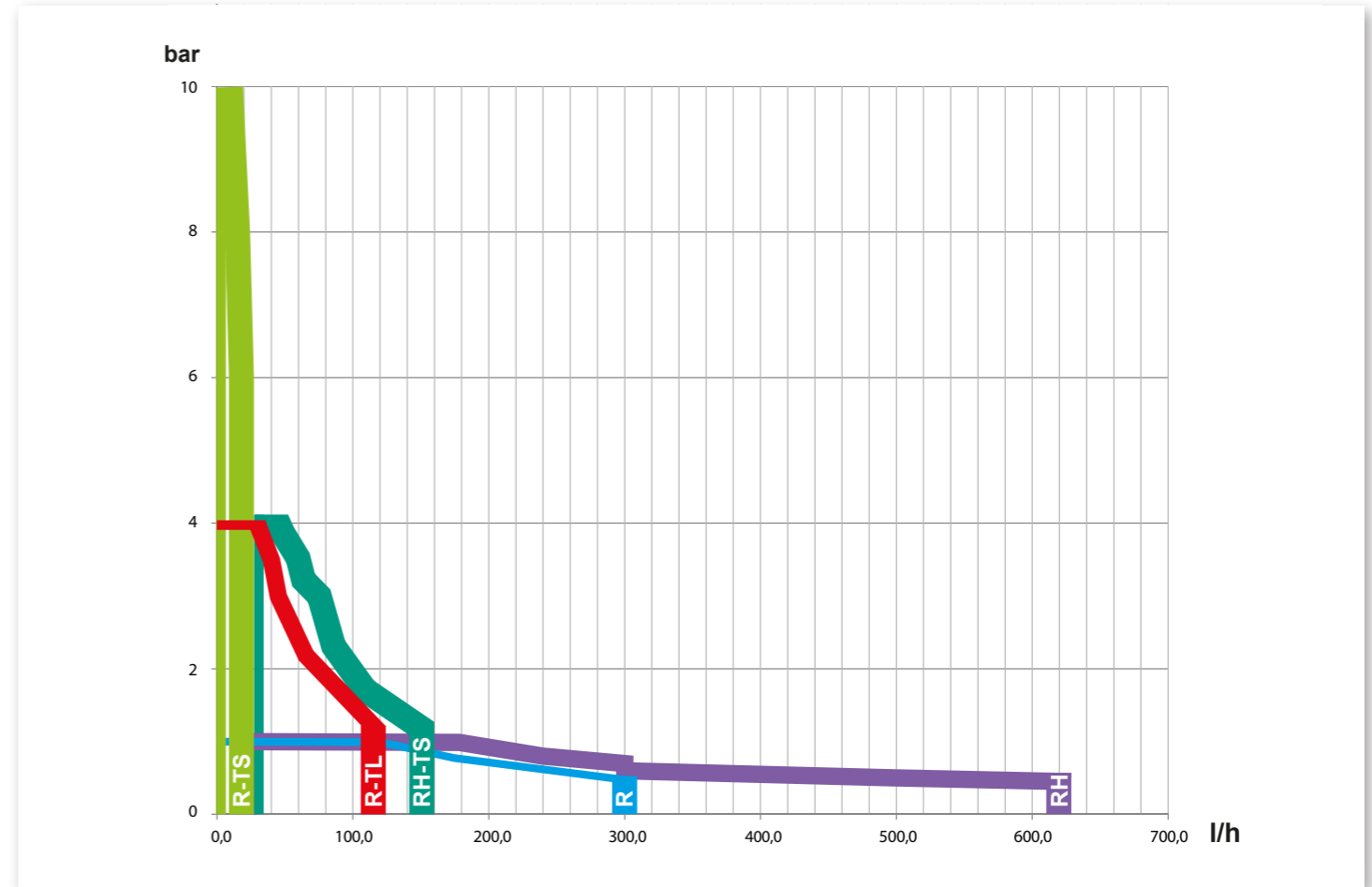


- Whitening and Bleaching process (Hydrogen Peroxide, Hypochlorite, Chlorine).
- Sizing (fillers, e.g. starch, polymers), Strengthening (Urea based chemicals, etc.), Pigmentation (dyes, pigments, etc).
- De-inking chemicals in recycling paper process (Sodium silicates, Sodium Hydroxide, Lime, Calcium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

Technical data

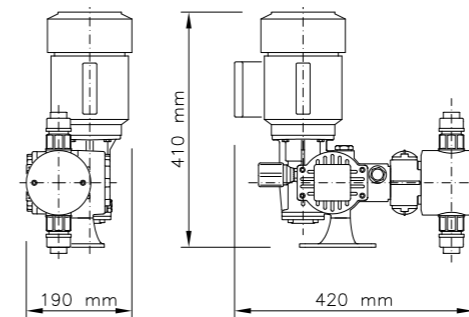
TYPE	50 Hz		60 Hz		PUMPHEAD WITH GLAND NUT				PUMPHEAD WITHOUT GLAND NUT				MOTOR kW				
	STROKES / 1	MAX FLOW RATE l/h	STROKES / 1	MAX FLOW RATE l/h	MAX PRESS. bar			CONNECTIONS		MAX PRESS. bar		THREADED CONNECTIONS					
					A	A-TL	P	A/A-TL	P	A/A-TL	P	A			P	A	P
R 6	50	0,8	43	0,7	/	40	10	1/4" BSP f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

Performance

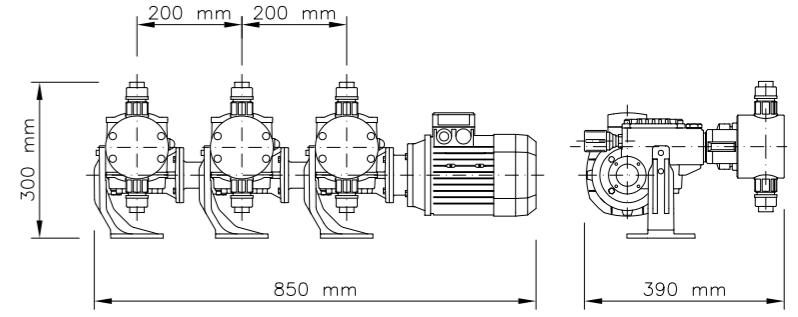


Overall dimensions

SINGLE PUMP - Manual Adjustment



MULTIPLE PUMP - Manual Adjustment



Material of construction

COMPONENTS	PUMPHEAD WITH GLAND NUT				
	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

COMPONENTS	PUMPHEAD WITHOUT GLAND NUT							
	PAE	PCF	PCV	AAF	AAE	ACE	ACV	ACF
PUMP HEAD	PVC	PVC	PVC	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L
PLUNGER	AISI-316L	CERAMIC	CERAMIC	AISI-316L	AISI-316L	CERAMIC	CERAMIC	CERAMIC
PLUNGER PACKING	EPDM	FPM	VULKOL.	FPM	EPDM	EPDM	VULKOL.	FPM
VALVE GUIDE	PP	PP	PP	PP	PP	PP	PP	PP
VALVE SEAT	AISI-316L	PVC	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L
VALVE (BALL)	AISI-316L	PYREX	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L	AISI-316L
VALVE SEAL	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		3/4" BSP f	0,37 kW	0,37 kW
	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-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			
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



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
						1/2" ANSI 600 RF	
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	100	3/8" NPT f	1/2" ANSI 600 RF
	70	10	60	8,5			
	95	15	84	13			
	115	18	114	18			

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



Technical data

TYPE	50 Hz		60 Hz		MAX PRESS. bar	THREADED CONNECTIONS	
	STROKES / 1	MAX FLOW RATE l/h	STROKES / 1	MAX FLOW RATE l/h		ACC	PPCC
H 43	70	90	60	75	10	1/2" BSP f	3/4" BSP m
	95	115	84	100			
H 50	70	120	60	100	10	1/2" BSP f	3/4" BSP m
	95	160	84	140			

Ø DIAPH./STROKE	50 Hz		60 Hz		MAX PRESS. bar	THREADED CONNECTIONS	
	TYPE	STROKES / 1	TYPE	STROKES / 1		PP	A
4 108	MH 73	70	73	MH 58	60	58	3/4" BSP m 3/4" BSP f
		95	100				
	MH 100	95	100	MH 90	84	90	

H/MH 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	ACC	PPCC
PUMP HEAD	AISI-316L	PP
PLUNGER	CERAMIC	CERAMIC
PLUNGER PACKING	VULKOLLAN	VULKOLLAN
VALVE GUIDE	PP	PP
VALVE SEAT	AISI-316L	AISI-316L
VALVE (BALL)	AISI-316L	AISI-316L
VALVE SEAL	FPM	SILICON



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



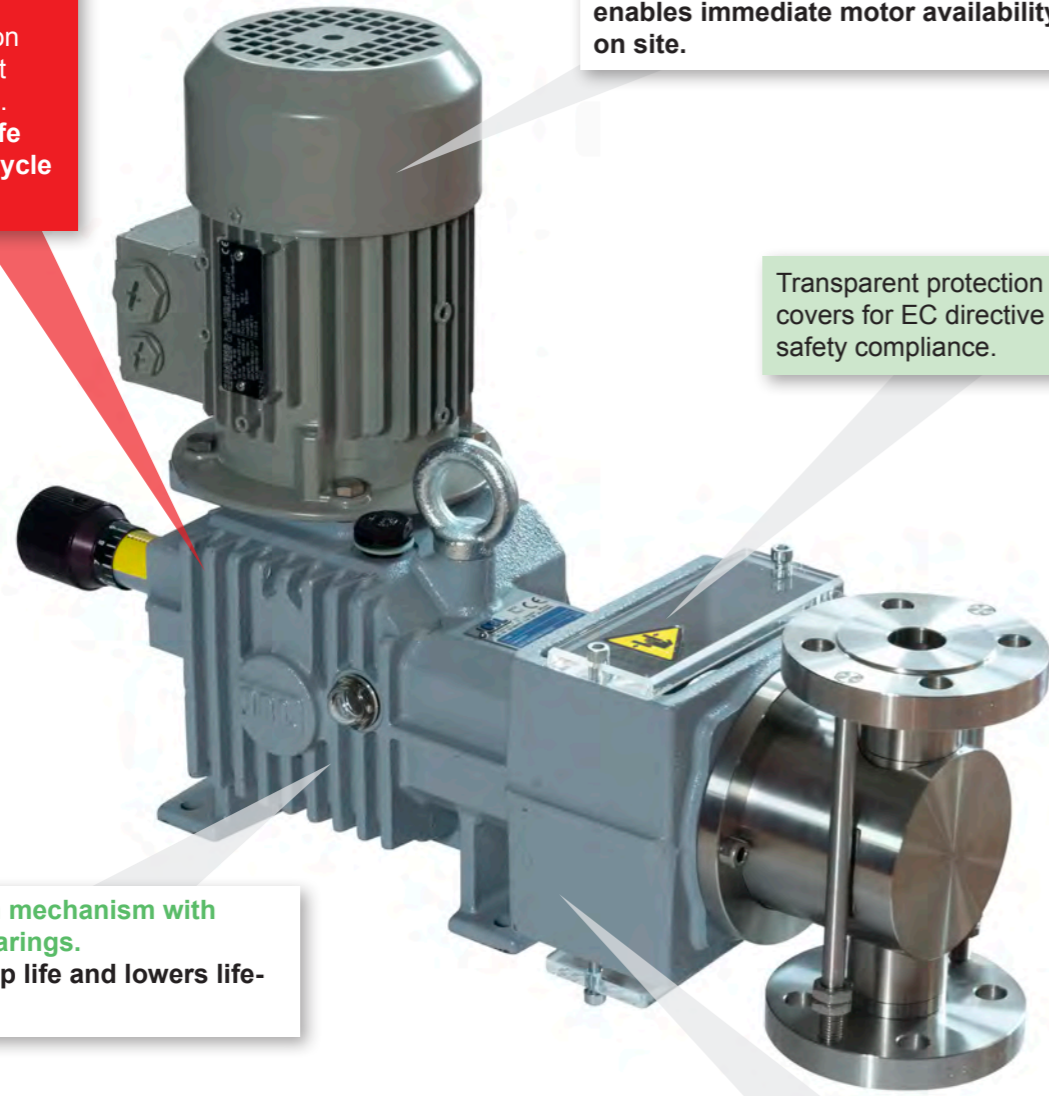
Painted cast iron casing:
Improved corrosion resistance against aggressive fumes. Extends pump life and lowers life-cycle cost.

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-TL	P	THR. / FLANGED		
								BSP f	UNI	ANSI
RH 20	63	28	50	22	10	40	/	3/8"	DN 15	1/2"
	86	38	75	33						
	104	47	98	44						
RH 25	63	44	50	34	10	40	10			
	86	60	75	52						
	104	75	98	70						
RH 30	63	64	50	50	10	32	10			
	86	86	75	75						
	104	110	98	103						
RH 40	63	110	50	85	10	17	10	1/2"	DN 20	3/4"
	86	150	75	130						
	104	200	98	185						
RH 50	63	176	50	135	10	8	10	/	DN 25	1"
	86	240	75	205	8	/	8			
	104	300	98	280	7	/	7			
RH 65	63	300	50	235	6	/	6	/	DN 25	1"
	86	410	75	355	5	/	5			
	104	500	98	470	4	/	4			
RH 80	63	420	50	330	4	/	/	/	DN 25	1"
	86	620	75	540	3,5	/	/			

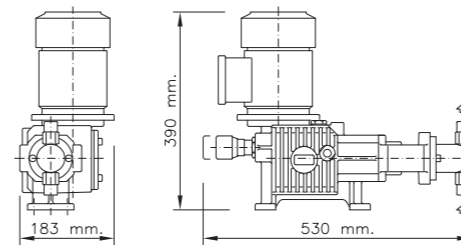
● 0,55kW

Material of construction

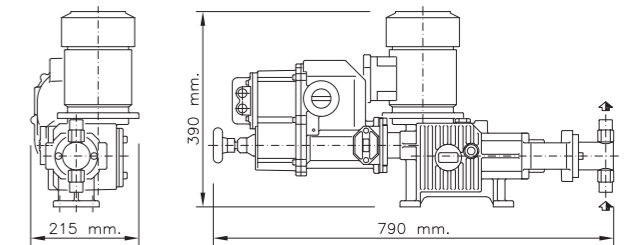
COMPONENTS	A	A-TL	AC	ACV	P
PUMP HEAD	AISI-316L	AISI-316L	AISI-316L	AISI-316L	PVC
PLUNGER	AISI-316L	AISI-316L	CERAMIC	CERAMIC	CERAMIC
PLUNGER PACKING	PTFE	PTFE	PTFE	VULKOLLAN	PTFE
VALVE GUIDE	AISI-316L	AISI-316L	AISI-316L	AISI-316L	PVC
VALVE SEAT	AISI-316L	AISI-316L	AISI-316L	AISI-316L	PVC
VALVE (BALL)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

Overall dimensions

SINGLE PUMP - Manual Adjustment

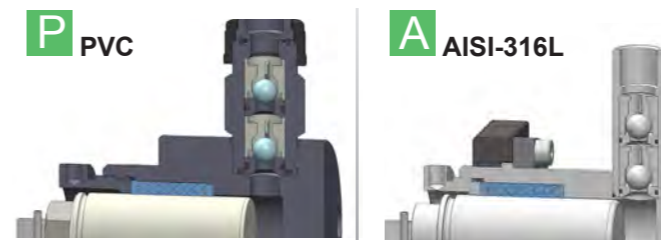


SINGLE PUMP - Electric Actuator Adjustment



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.

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).

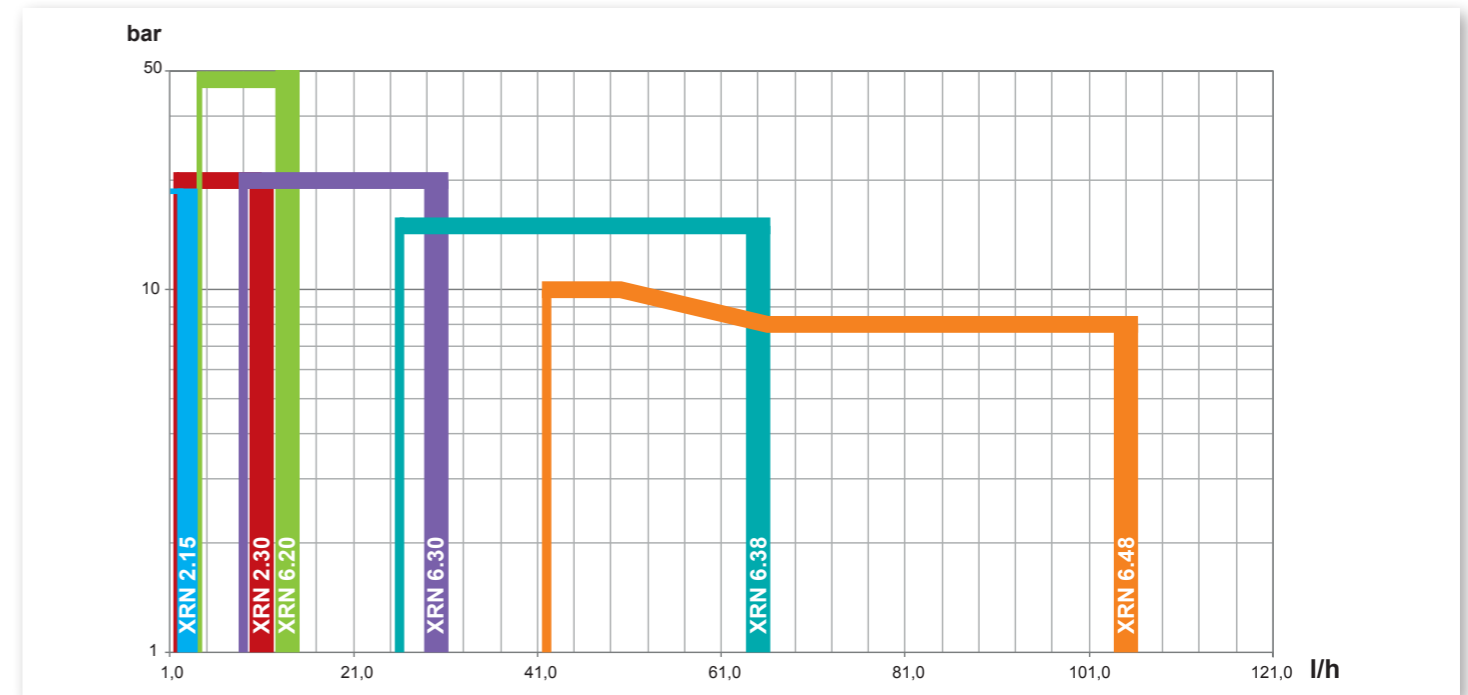
ATEX

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

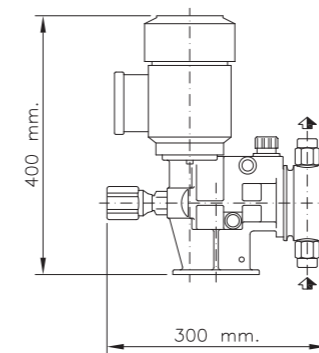
TYPE	50 Hz		60 Hz		MAX PRESS. bar		BUILT-IN RELIEF VALVE SET PRESS. (PSV) bar	
	STROKES / 1	MAX FLOW RATE l/h	STROKES / 1	MAX FLOW RATE l/h	①		①	
					A	P - S	PSV SET PRESS. bar	MAX WORK. PRESS. bar
XRN 2.15	55	0,6	67	0,8	20	13		
	72	0,9	87	1				
	85	1,2	103	1,2				
	111	1,5	133	1,6				
	145	2						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

Performance

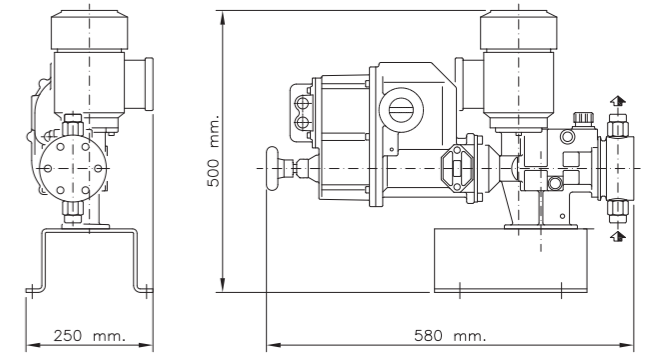


Overall dimensions

SINGLE PUMP - Manual Adjustment



SINGLE PUMP - Electric Actuator Adjustment



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

Sectional view

THREADED CONNECTIONS

P PVC

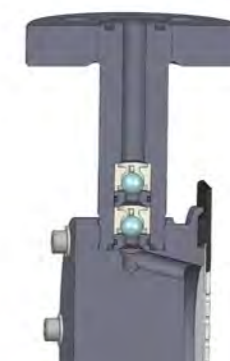


A AISI-316L



FLANGED CONNECTIONS

P PVC



A AISI-316L



► **Safe area**

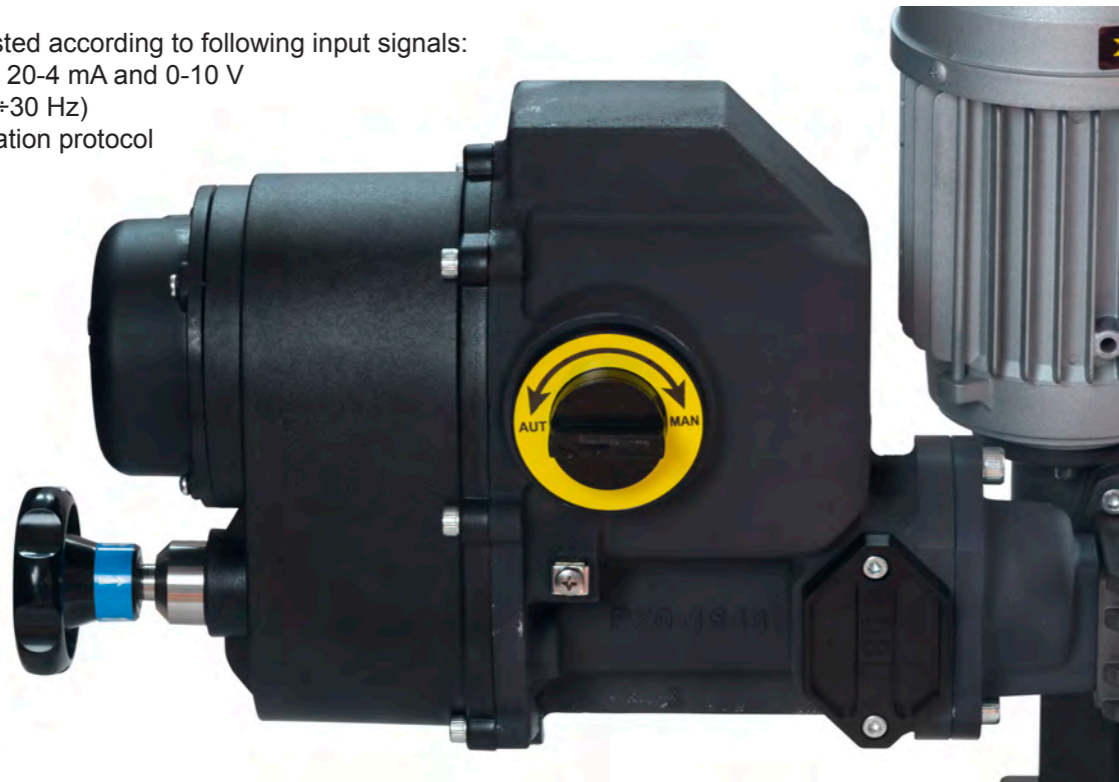
OBL Z type electric actuator, option available on all Blackline pump models M, ME, R, XRN remotely controls the pumps flowrate via input signal.

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



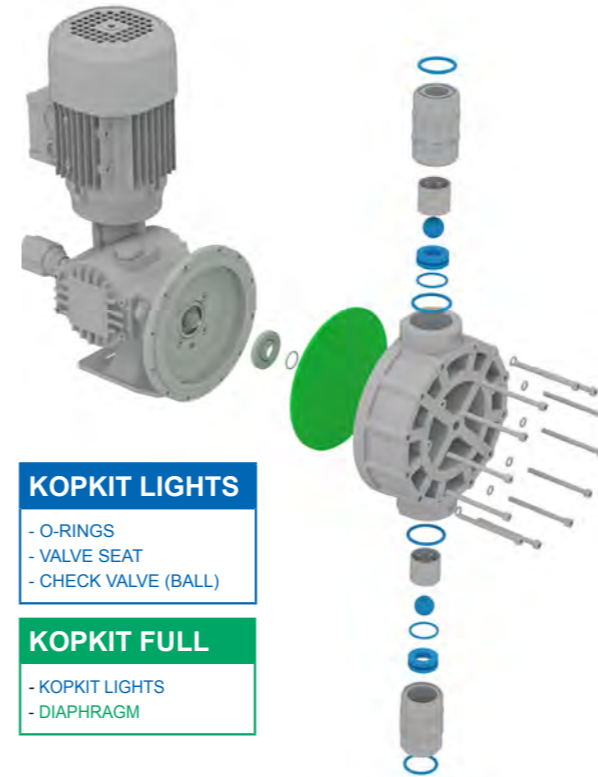
OBL has a solution whether your pump needs quick, urgent maintenance or a full service repair.

REPAIR IT ONCE, REPAIR IT RIGHT !

Everything in one place! All the parts you need to get pumping again. Increase uptime! Maximize your productivity with fewer repairs.

Reduce Frequency of repairs ! Reliable replacement parts, guaranteed to last. SAVE TIME AND MONEY! Simplicity in both ordering and replacing parts.

► **M PUMPS**



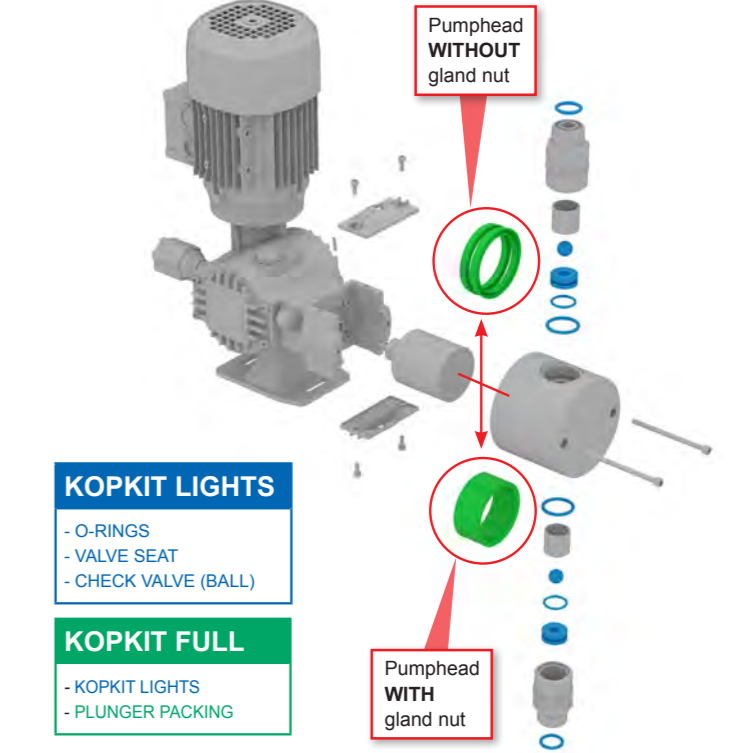
KOPKIT LIGHTS

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

KOPKIT FULL

- KOPKIT LIGHTS
- DIAPHRAGM

► **R PUMPS**



KOPKIT LIGHTS

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

KOPKIT FULL

- KOPKIT LIGHTS
- PLUNGER PACKING

LEARN MORE AT www.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

- 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 Genuine Spare Parts, keep your pump running at optimal levels.
OBL has built a reputation for superior reliability by supplying carefully designed high-quality products. However, even the best equipment requires minimal preventative maintenance. OBL offers KOPKITS designed to avoid unnecessary downtime and guarantee the highest level of efficiency and uninterrupted service from your OBL pump. Many Pump models have a unique KOPKIT containing all the parts necessary to ensure reliable operation. KOPKITS come in two variants: KOPKIT light and KOPKIT full. the KOPKIT is your best friend when it comes to breakdowns, it will get you back in business fast! Preventative maintenance will ensure continued high performance from your pump. OBL ensures ready availability of KOPKITS for most pumps.

► All of the items you need to complete your system

Thanks to obl's experience, we can provide many of the accessories to complete systems for almost all applications. This page shows some examples designed to meet different customer needs.

Enhanced Pump Performance and Productivity

Extended MTBF (Mean Time Between Failure)

Protect Ancillary Equipment in Fluid Flow Path

Enhance Safety and Environmental Responsibility

Precise Pump Control and Dosing efficiency.

CALIBRATION POT

Provides a verification of the actual flow rate of your chemical dosing pump. The calibration pot must be installed on the supply side of the pump. It is not essential but is extremely useful when dosing hazardous chemicals, or when a pulsation damper is absent on the discharge line or in any situation where it is difficult to determine and verify the pumps flow rate.

PULSATION DAMPENER

It is particularly important in a dosing process when using reciprocating metering pumps, many are the benefits of its installation:

- Protects the pump from high pressure peaks (water hammer effect) and increases lifespan of the pump and system
- Flow rate becomes continuous with a linear flow, increasing the reliability and ease of the dosing process.
- Significant reduction of vibrations transmitted along the discharge line
- Helps reduce noise emission of the pump

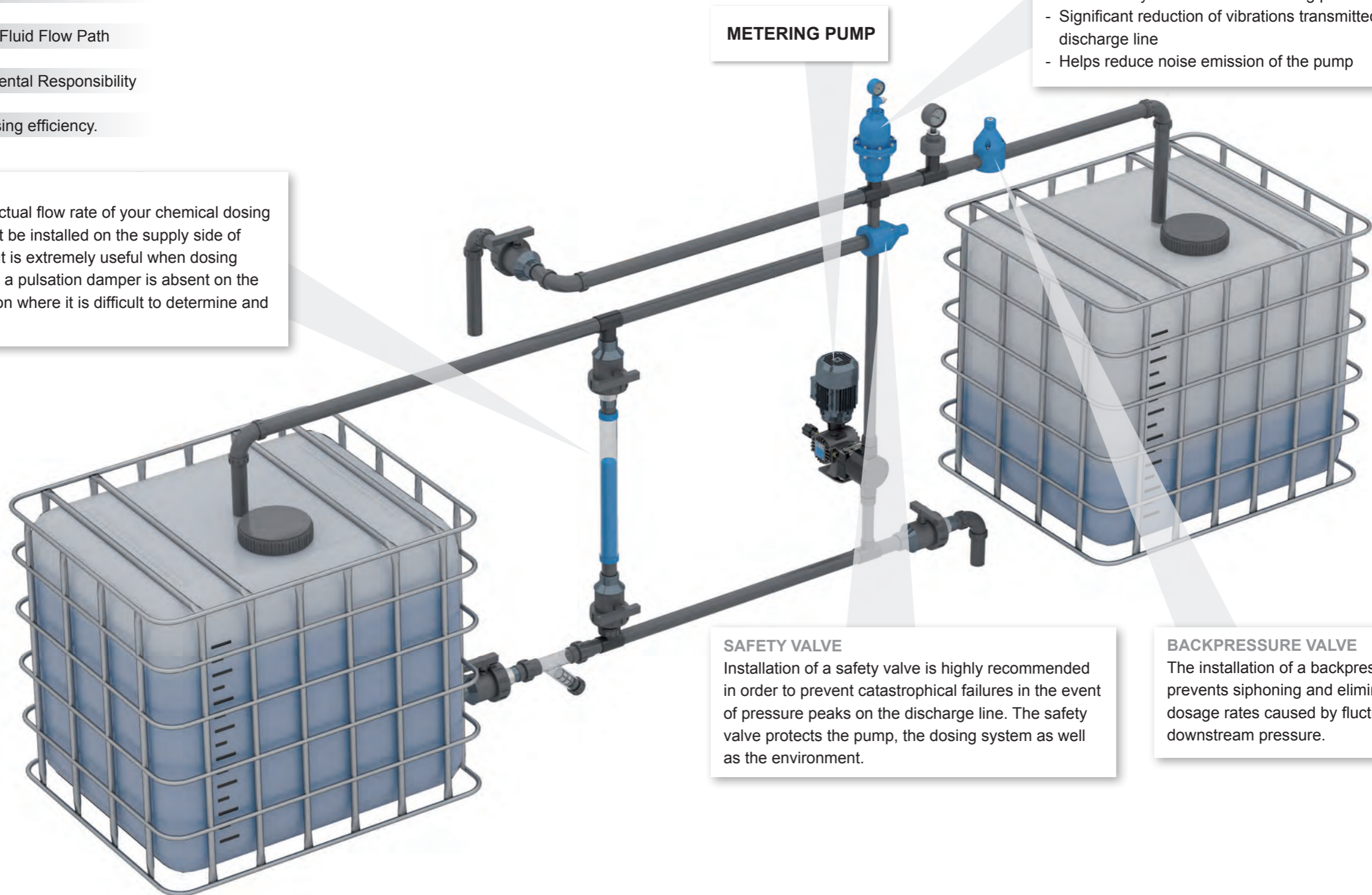
METERING PUMP

SAFETY VALVE

Installation of a safety valve is highly recommended in order to prevent catastrophic failures in the event of pressure peaks on the discharge line. The safety valve protects the pump, the dosing system as well as the environment.

BACKPRESSURE VALVE

The installation of a backpressure valve prevents siphoning and eliminates varying dosage rates caused by fluctuating downstream pressure.



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