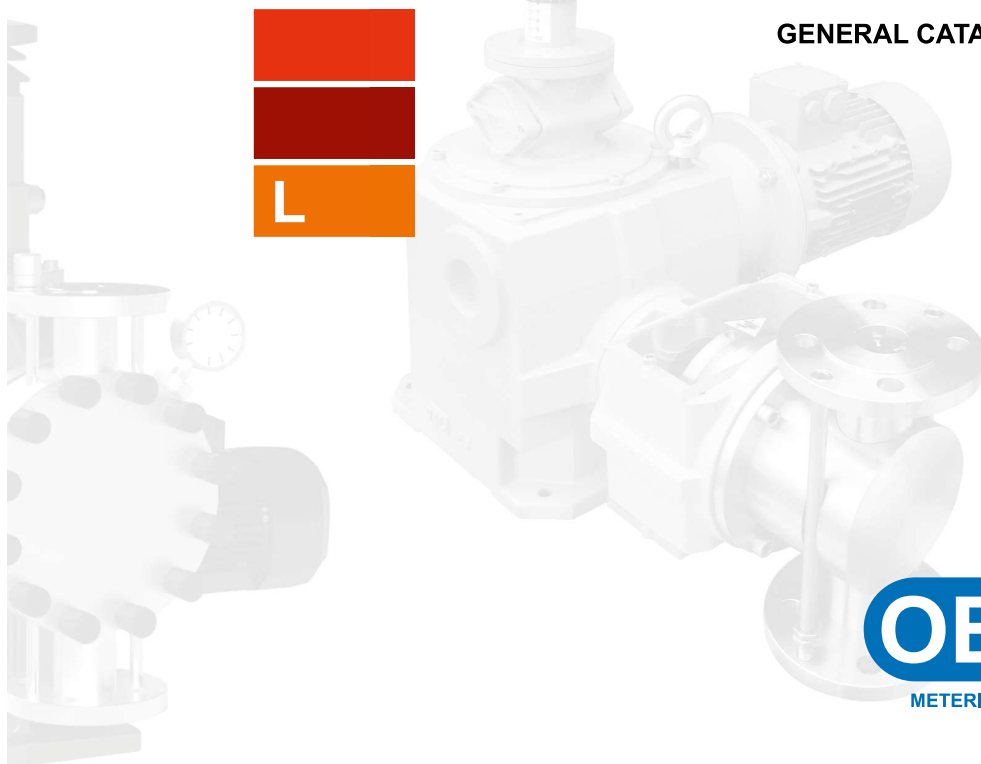


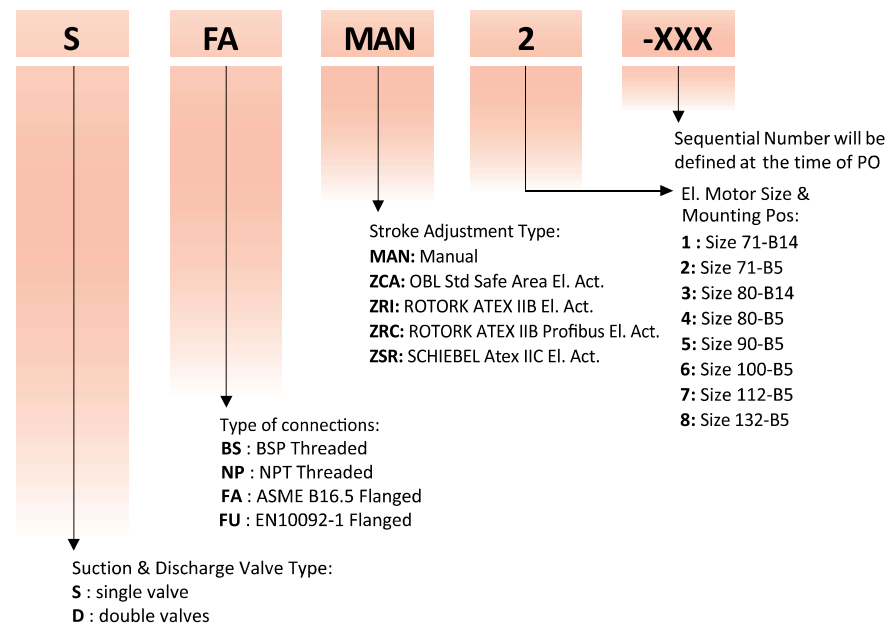
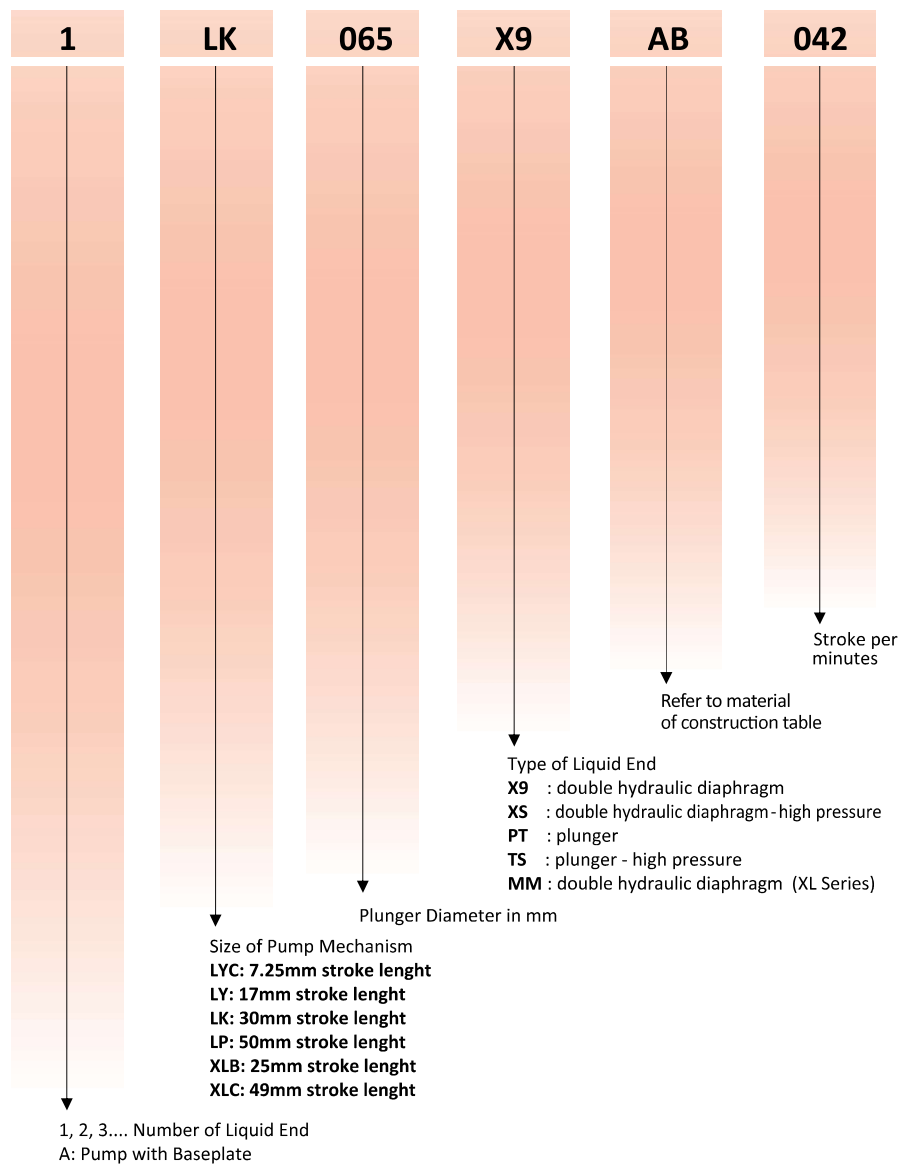


DIAPHRAGM AND PLUNGER PROCESS METERING PUMPS

GENERAL CATALOGUE



PUMPS CODIFICATION



Markets & Applications

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

WATER & WASTE WATER TREATMENT



- Coagulants and Flocculants dosing
- Chlorination
- Dosing of reagents for pH control
- Dosing of anti-scaling and de-oxygenating reagents
- Chemical physical plant

OIL & GAS - ONSHORE & OFFSHORE



- Chemical injection for oil & gas
- Dye injection for fuels
- Offshore chemical metering system
- Proportional injection in pipelines

CHEMICAL & PETROCHEMICALS



- Pipeline proportional Injection
- Continuous production of liquid detergents
- Liquid soap production
- Resin blending system
- Water treatment

POWER PLANTS



- Dosing of phosphates, hydrazine and other oxygen scavengers
- Combustion optimization for oil fired power stations

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).

PULP & 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.).

Approvals & References



Motor UNEL-MEC:

Motor UNEL-MEC standard
3 phase, 50/60Hz. Single
phase and **ATEX** configurations
available

Designed for industrial/
environmental **harsh**
conditions

Fully comply to API
675 STD constructional
and performance
requirements

Power transmission
through multiple units
is easily achieved by
common, **low-torque**
speed shaft.

Positive return
mechanism / Full
Motion Extends pump
life and lowers life-cycle
cost.
Heavy-duty construction
designed for continuous
(24/7 – 8000 hours/year)
industrial operation.

ATEX

All models can comply with
ATEX (2014/34/CE) Zone 2
(Group II category 3) and Zone
1 (Group II, Category 2)

- $\pm 1\%$ steady **state accuracy** within
10% and 100% of capacity.
- $\pm 3\%$ **repeatability** and **linearity**
within 10% and 100 % of capacity.

High efficiency
gearbox
Splash lubricated
components

Adjustable plunger packing

Easy access to plunger
packing gland-nut, simple to
tighten and prevent leakages
during operation and monitor
the durability of the plunger
packing.

Self-centring plunger

Unique feature on all OBL high
pressure plunger pumps «TS» –
the self-centering plunger prevents
leakages by utilizing all the plunger
packing rings effectively containing
the chemical even at high pressure.

LY PLUNGER METERING PUMP

► Technical data 50 Hz

PUMP	STROKE PER MIN.	CAPACITY L/H	MAX PRESS. (bar)	CONNECTIONS			
			0,37 kW	THREADED		FLANGED	
			A	BSP f	NPT	UNI EN10092-1	ASME B16.5
LYC 006	36	0,22	150	3/8"	3/8"	15	1/2"
	50	0,34					
	70	0,54					
	100	0,72					
LY 006	25	0,45	150	3/8"	3/8"	15	1/2"
	36	0,7					
	50	0,97					
	70	1,36					
LY 010	100	1,85	100	3/8"	3/8"	15	1/2"
	25	1,6					
	36	2,4					
	50	3,5					
LY 015	70	4,5	100	3/8"	3/8"	15	1/2"
	100	6,5					
	118	7,6					
	25	3,8					
LY 020	36	5,5	80	3/8"	3/8"	15	1/2"
	50	8					
	70	11					
	100	15					
LY 030	118	17	80	3/8"	3/8"	15	1/2"
	25	6,9					
	36	10					
	50	14,5					
LY 030	70	20	40	3/8"	/	15	1/2"
	100	28					
	118	33					
	25	16					
LY 030	36	23	40	3/8"	/	15	1/2"
	50	32					
	70	45					
	100	62					
LY 030	118	75	30	3/8"	/	15	1/2"
	25	16					
	36	23					
	50	32					

Plunger stroke: 17 mm

Indicative weight: 25 Kg

Flow rate adjustment system: manual Via Micrometric Knob

Oil pre-filled pump

Other strokes available for 60 Hz

Pumps painted:

- Casing: Water-Based painting, 50 microns dry thickness (RAL 7001)
- Motor: manufacturer standard color

Motor characteristics:

UNEL-MEC STD motors, 4Poles, IP55, CL.F, IEC 34-1

- 3 Phases motor: 0,37kW (size 71-B14), 50Hz, 230/400V

Pressure up to **400 bars** (TS version)
Viscosity up to **55.000 cps**

Low ratio between plunger diameter
and stroke length = **good suction
capacity**



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

Multi-head option:

- different materials (metallic and non metallic)
- different duty points (various flow rates and pressures)
- different pump model and different strokes

Greater flexibility in pump selection

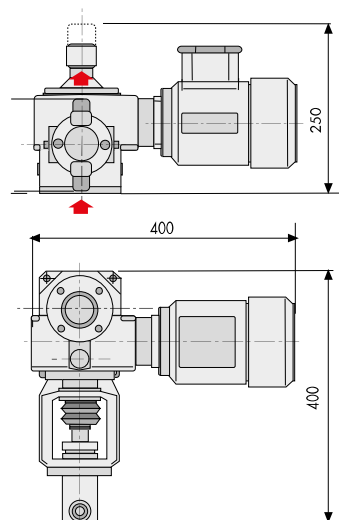
LY

PLUNGER METERING PUMP

► Technical data 50 Hz

PUMP	STROKE PER MIN.	CAPACITY L/H	MAX PRESS. (bar) 0,37 kW	CONNECTIONS			
				THREADED		FLANGED	
			A	BSP f	NPT	UNI EN10092-1	ASME B16.5
LY 040	25	30	22	1/2"	/	15	1/2"
	36	43	22				
	50	60	22				
	70	82	20				
	100	110	18				
	118	130	16				
LY 050	25	45	14	/	/	20	3/4"
	36	64	14				
	50	90	14				
	70	130	13				
	100	175	11				
	118	210	10				
LY 065	25	77	9	/	/	20	3/4"
	36	111	9				
	50	155	9				
	70	220	9				
	100	300	8				
	118	350	7				

► Overall dimensions



LK

PLUNGER METERING PUMP

► Technical data 50 Hz

PUMP	STROKE PER MIN.	CAPACITY L/H	MAX PRESS. (bar)		CONNECTIONS	
			A	U	UNI EN10092-1	ASME B16.5
LK 020	25	12,5	100	/	15	1/2"
	42	21				
	60	30				
	82	38				
	102	48				
	123	58				
LK 030	25	29	70	/	20	3/4"
	42	49	70			
	60	70	70			
	82	90	70			
	102	110	52			
	123	135	43			
LK 040	25	53	40	/	20	3/4"
	42	89	40			
	60	128	40			
	82	165	35			
	102	210	30			
	123	250	25			
LK 050	25	83	25	/	25	1"
	42	140	25			
	60	200	25			
	82	265	25			
	102	330	18			
	123	400	15			
LK 065	25	141	15	10	25	1"
	42	238	15	10		
	60	340	15	10		
	82	450	15	10		
	102	550	12	10		
	123	665	9	9		
LK 080	25	212,5	10	10	40	AISI 1" ½
	42	357	10	10		PVC 2"
	60	510	10	10		
	82	700	8,5	8,5		AISI 1" ½
	102	850	7	7		
	123	1000	6	6		PVC 2"
LK 100	25	333	6	6	40	AISI 1" ½
	42	560	6	6		
	60	800	6	6		
	82	1050	4,5	4,5		
	102	1300	4	4		
	123	1567	4	4		

Plunger stroke: 30 mm

Indicative weight: 45 Kg

Flow rate adjustment system: manual Via

Micrometric Knob

Oil pre-filled pump

Other strokes available for 60 Hz

Pumps painted:

- Casing: Water-Based painting, 50 microns dry thickness (RAL 7001)

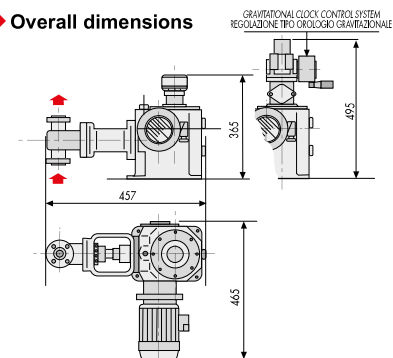
- Motor: manufacturer standard color

Motor characteristics:

UNEL-MEC STD motors, 4Poles, IP55, CL.F, IEC 34-1

- 3 Phases motor: 0,37kW, 0,75kW, 50Hz, 230/400V

► Overall dimensions



LP PLUNGER METERING PUMP

► Technical data 50 Hz

PUMP	STROKE PER MIN.	CAPACITY L/H	MAX PRESS. (bar)	CONNECTIONS	
			A	UNI EN10092-1	ASME B16.5
LP 040	40	135	90	20	3/4"
	56	189	90		
	68	230	90		
	82	275	80		
	97	340	80		
	120	420	80		
	150	525	80		
LP 050	40	223	60	25	1"
	56	312	60		
	68	380	60		
	82	445	60		
	97	540	55		
	120	650	45		
	150	812,5	45		
LP 065	40	382	38	40	1" ½
	56	535	38		
	68	650	38		
	82	750	38		
	97	900	35		
	120	1100	27		
	150	1375	27		
LP 080	40	558	25	40	1" ½
	56	782	25		
	68	950	25		
	82	1100	25		
	97	1380	22		
	120	1650	17		
	150	2062	17		
LP 100	40	882	15	40	1" ½
	56	1235	15		
	68	1500	15		
	82	1800	15		
	97	2150	12		
	120	2700	11		
	150	3375	11		
LP 120	40	1235	10	50	2"
	56	1729	10		
	68	2100	10		
	82	2500	10		
	97	3200	9		
	120	3800	8		
	150	4750	8		
LP 158	40	2176	6	50	2"
	56	3000	6		
	68	3700	6		
	82	4500	6		
	97	5500	5		
	120	6800	5		

LP PLUNGER METERING PUMP

► Technical data 50 Hz

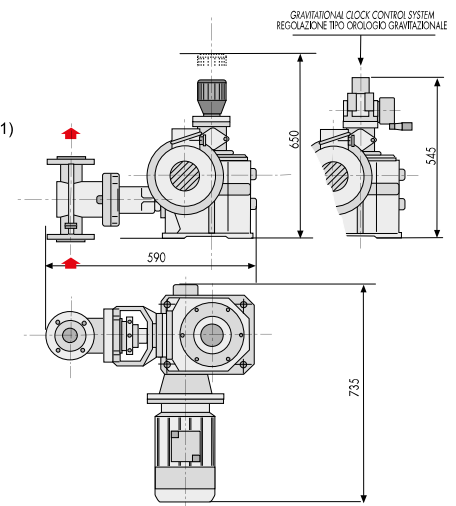
PUMP	STROKE PER MIN.	CAPACITY L/H	MAX PRESS. (bar)	FLANGED	
			U	UNI EN10092-1	ASME B16.5
LP 080	40	558	10	40	2"
	56	782			
	68	950			
	82	1100			
	97	1380			
	120	1650			
	150	2062,5			
LP 100	40	882	10	40	2"
	56	1235			
	68	1500			
	82	1800			
	97	2150			
	120	2700			
	150	3375			
LP 120	40	1235	10	50	2"
	56	1729	10		
	68	2100	10		
	82	2500	10		
	97	3200	9		
	120	3800	8		
	150	4750	8		
LP 158	40	2176	6	50	2"
	56	3000	6		
	68	3700	6		
	82	4500	6		
	97	5500	5		
	120	6800	5		

Plunger stroke: 50 mm
 Indicative weight: 120 Kg
 Flow rate adjustment system: manual Via Micrometric Knob
 Oil pre-filled pump
 Other strokes available for 60 Hz

Pumps painted:
 - Casing: Water-Based painting, 50 microns dry thickness (RAL 7001)
 - Motor: manufacturer standard color

Motor characteristics:
 UNEL-MEC STD motors, 4Poles, IP55,
 CL.F, IEC 34-1
 - 3 Phases motor: 3+4kW, 50Hz, 230/400V

► Overall dimensions



TS

HIGH PRESSURE PLUNGER METERING PUMP TS VERSION

► Technical data 50 Hz

PUMP	TYPES	PLUNGER PACKING	STROKE PER MIN.	CAPACITY L/H	MAX PRESS. (bar)
LY	LYC 010	PTFE	36	1	300
			50	1,5	
			70	2	
			100	2,8	
	LY 010	PTFE + KEVLAR BRAID	36	2,1	300
			50	3	
			70	4	
			100	5,5	
LK	LK 010	PTFE KEVLAR BRAID	36	4,68	160
			50	6,5	160
			70	10	150
			100	13	140
	LK 015	PTFE + KEVLAR BRAID	42	3,5	400
			60	5	400
			82	7	400
			102	10	350
	LK 020	PTFE + KEVLAR BRAID	42	10	250
			60	15	230
			82	20	220
			102	24	220
LP	LP 020	PTFE + KEVLAR BRAID	42	30	160
			60	42	140
			82	50	120
			102	52	120
	LP 025	PTFE + KEVLAR BRAID	56	48	400
			68	58	370
			82	70	350
			97	82	350
	LP 030	PTFE + KEVLAR BRAID	120	102	350
			56	75	250
			68	90	230
			82	105	220
	LP 030	PTFE + KEVLAR BRAID	97	124	220
			120	153	220
			56	111	170
			68	135	165
			82	165	160
			97	195	150
			120	241	150

Plunger stroke: LYC = 7,5mm; LY = 17mm; LK = 30mm; LP = 50mm

Flow rate adjustment system: manual Via Micrometric Knob

Oil pre-filled pump

Other strokes available: 25 - 40 - 123 - 150

Other strokes available for 60 Hz

Pumps painted:

- Casing: Water-Based painting, 50 microns dry thickness (RAL 7001)

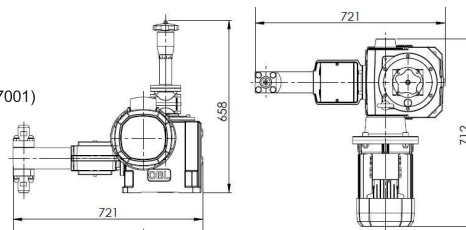
- Motor: manufacturer standard color

Motor characteristics:

UNEL-MEC STD motors, 4Poles, IP55, CL.F, IEC 34-1

- Phases motor: 3+4kW, 50Hz, 230/400V

► Overall dimensions



► Material of construction

CODE	LIQUID END	PLUNGER	PLUNGER PACKING	VALVE SEAT	VALVE BALL	VALVE GUIDE	VALVE SEALS
A1	AISI-316L	SAF-2205	PTFE	CERAMIC	RUBY	AISI-316L	FPM
A2	AISI-316L	SAF-2205	PTFE	AISI-316L	AISI-316L	AISI-316L	FPM
A3	AISI-316L	AISI-316L	PTFE	AISI-316L	AISI-316L	AISI-316L	FPM
A4	AISI-316L	SAF-2205	PTFE	AISI-316L	AISI-316L	AISI-316L	FPM
A5	AISI-316L	SAF-2205	PTFE+ KEVLAR	AISI-316L	AISI-316L	AISI-316L	FPM
A6	AISI-316L	SAF-2205	PTFE	AISI-316L	CERAMIC	AISI-316L	PTFE
A7	AISI-316L	AISI-316L	PTFE	AISI-316L	AISI-316L	AISI-316L	PTFE
A8	AISI-316L	CERAMIC	PTFE WHITE	AISI-316L	AISI-316L	AISI-316L	PTFE
U1	PVC-U	CERAMIC	PTFE	PVC-U	PYREX	PVC-U	FPM
U2	PVC-U	CERAMIC	PTFE	PVC-U	PYREX	PP	FPM
U3	PVC-U	CERAMIC	PTFE	AISI-316L	AISI-316L	PP	FPM

► MANUAL ADJUSTMENT

0÷100% manual adjustment via:

Knob with micrometer scale



Gravitational dial handwheel



► AUTOMATIC ADJUSTMENT

ELECTRICAL ACTUATOR Z TYPE



Electrical actuator features

- 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

SAFE AREA

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

► AUTOMATIC ADJUSTMENT

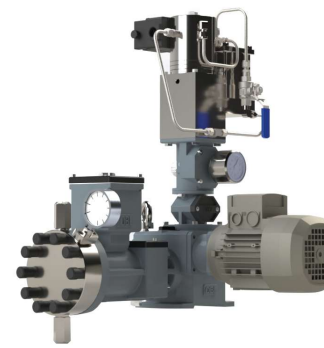
ELECTRICAL ACTUATOR ATEX

- II 2G Ex-de IIC T4
- 100/240V – 1 – 50/60 Hz IP66
- 4-20 mA signal and feedback



PNEUMATIC ACTUATOR W TYPE

- ATEX II 2G IIC T6
- Pneumatic actuator type W
- Pilot signal 3÷15 PSI
- Air supply 4-6 bar
- Emergency manual override



oblpumps.it/Topline.php

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