

FLOWTEC

Straight
to the heart

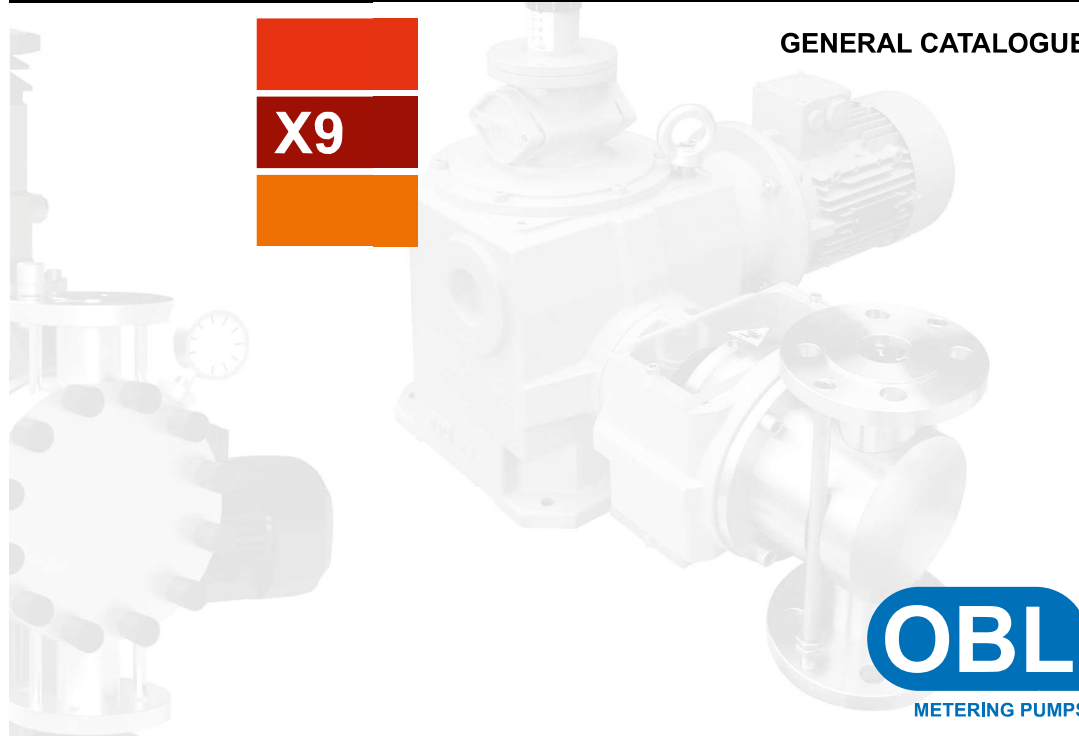
▲ **topline** ▲
an OBL brand



DIAPHRAGM AND PLUNGER PROCESS METERING PUMPS

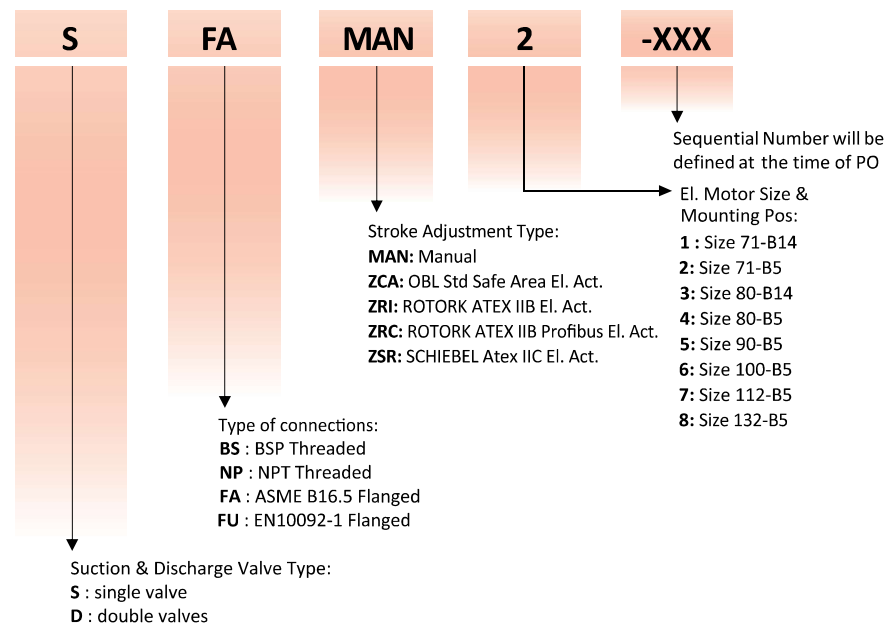
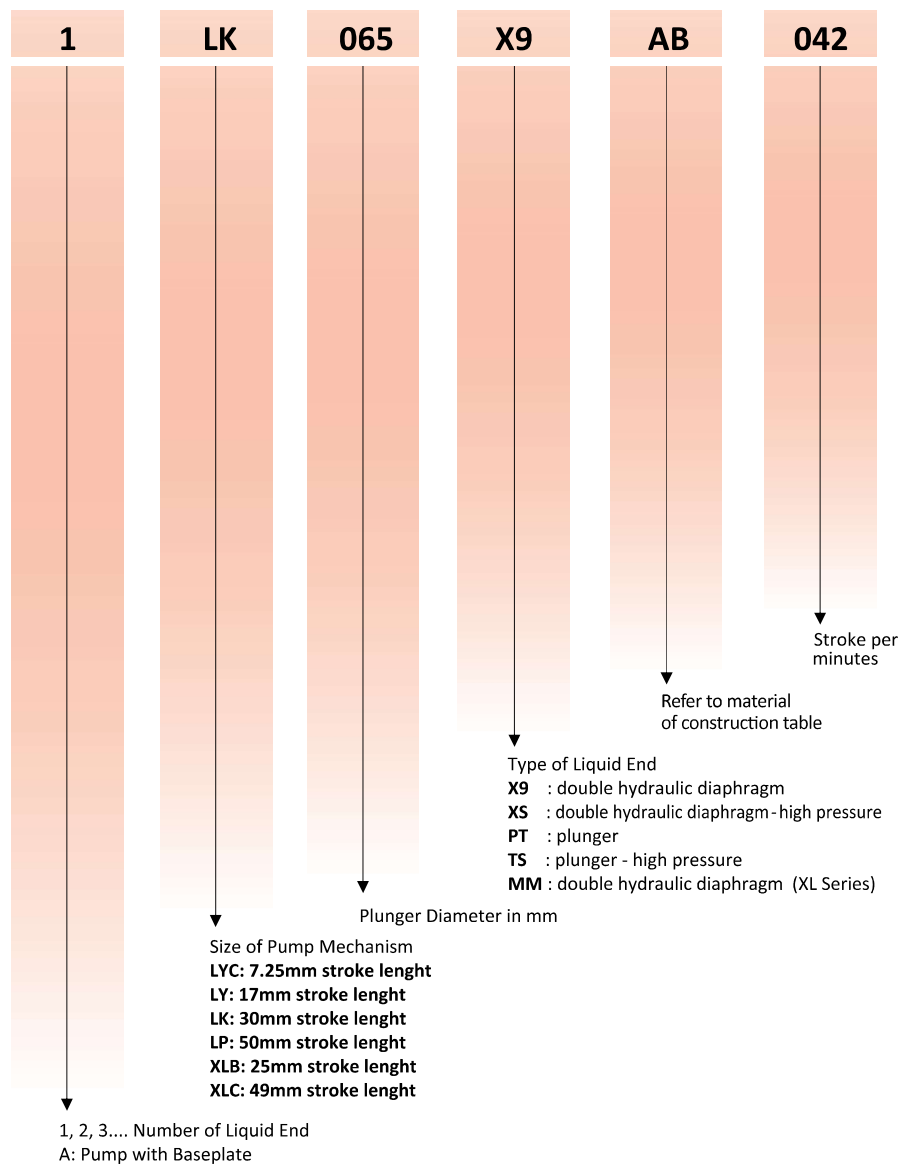
GENERAL CATALOGUE

X9



OBL
METERING PUMPS

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).

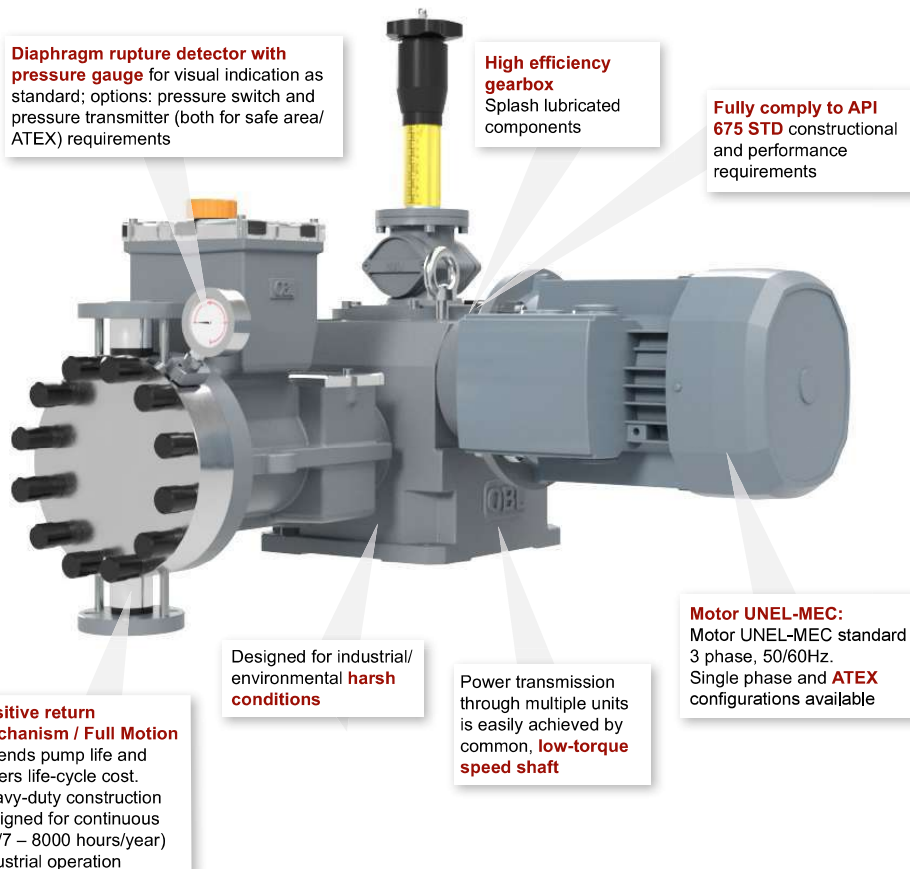
PULP & PAPER



- 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

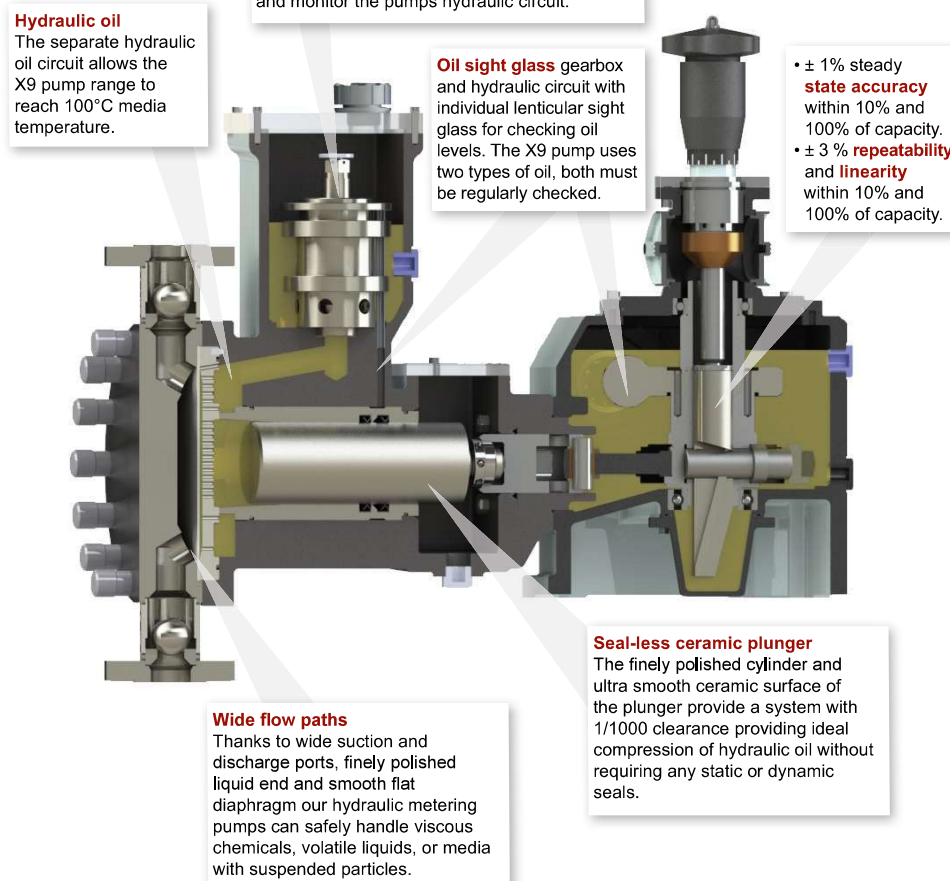




ATEX



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



ATEX

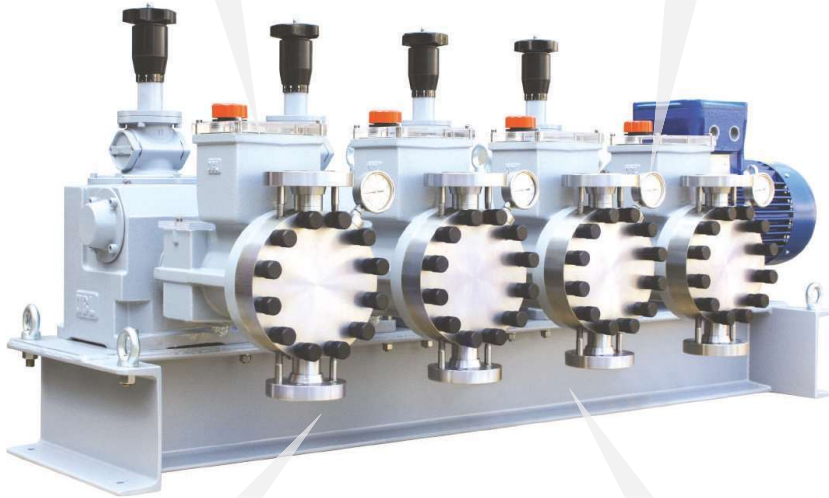


All models can comply with ATEX (2014/34/CE) Zone 2 (Group II category 3) and Zone 1 (Group II, Category 2)

This pump are supplied as STD with local visual diaphragm burst detector via pressure gauge. On demand, pressure switch and pressure transmitter for both safe and hazardous areas can be supplied. Oil-bathed seals ceramic plunger guarantees low NPSHr and minimum maintenance.

Pressure up to **300 bars**
(XS version)

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 or pneumatic stroke actuator.

Greater flexibility of applications

Multi-head options:

- 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

► **Technical data for 50 Hz**

PUMP	STROKES PER MIN.	CAPACITY L/H	MAX. BUILT IN RELIEF VALVE SET PRESSURE (bar)			CONNECTIONS		
			A	U	S	THREADED	FLANGED	
							UNI EN10092-1	ASME B16.5
LYC010-X9	25	0,4	100	13	20	1/4" NPT f	15	1/2"
	36	0,6						
	50	0,86						
	70	1,25						
	100	1,66						
	118	2,14						
LY010-X9	25	1,3	100	13	20	1/4" NPT f	15	1/2"
	36	2						
	50	2,8						
	70	4,3						
	100	5,7						
	118	7						
LY015-X9	25	3	100	13	20	1/4" NPT f	15	1/2"
	36	4,8						
	50	7,8						
	70	11,3						
	100	15,5						
	118	18,5						
LY020-X9	25	10	100	13	20	3/8" NPT f	15	1/2"
	36	14						
	50	20						
	70	28						
	100	33						
	118	39						
LY025-X9	25	11	100	13	20	3/8" NPT f	15	1/2"
	36	16						
	50	22						
	70	32						
	100	43						
	118	52						
LY030-X9	25	16	100	13	20	3/8" NPT f	15	1/2"
	36	24						
	50	31						
	70	48						
	100	66						
	118	78						
LY040-X9	25	27	100	13	13	1/2" BSP f	15	1/2"
	36	39						
	50	55						
	70	85						
	100	115						
	118	135						
LY050-X9	25	45	100	14	14	/	20	3/4"
	36	64						
	50	90						
	70	135						
	100	180						
	118	215						

Plunger stroke: 17 mm - Indicative weight: 35 Kg

Flow rate adjustment system: manual Via Micrometric Knob

Oil pre-filled pump

Other strokes available for 60 Hz

Pumps painted:

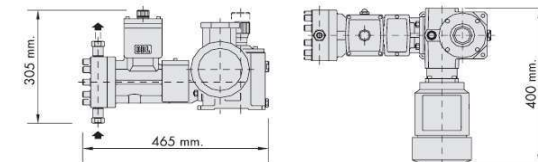
- Casing: Water-Based painting, 50 microns dry thickness (RAL 7001)
- Motor: manufacturer standard color

Motor characteristics:

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

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

► **Overall dimensions**



LK HYDRAULIC DIAPHRAGM METERING PUMP

► Technical data for 50 Hz

PUMP	STROKES PER MIN.	CAPACITY L/H	MAX. BUILT IN RELIEF VALVE SET PRESSURE (bar)			CONNECTIONS	
			A	U	S	UNI EN10092-1	ASME B16.5
LK020-X9	25	13	100	/	/	15	1/2"
	42	22					
	60	32					
	82	42					
	102	53					
	123	64					
LK025-X9	25	21	100	/	/	15	1/2"
	42	34	100				
	60	50	100				
	82	66	100				
	102	82	90				
	123	100	80				
LK030-X9	25	30	70	/	/	15	1/2"
	42	50	70				
	60	72	70				
	82	96	65				
	102	119	52				
	123	143	43				
LK040-X9	25	53	40	/	/	20	3/4"
	42	87	40				
	60	127	38				
	82	170	33				
	102	211	28				
	123	255	25				
LK050-X9	25	83	25	/	13	25	1"
	42	137	25				
	60	200	23				
	82	266	20				
	102	330	18				
	123	400	15				
LK065-X9	25	140	13	/	13	25	1"
	42	232	13		13		
	60	337	13		13		
	82	450	12		12		
	102	560	11		11		
	123	675	9		10		
LK080-X9	25	210	10	10	10	25	1"
	42	364	10	10	10	25	1"
	60	520	10	10	10	25	1"
	82	690	8,5	8,5	8,5	25	1"
	102	870	7	7	7	40 (A - U - S)	1 1/2" (A) - 2" (U-S)
	123	1050	5,5	5,5	5,5	40 (A - U - S)	1 1/2" (A) - 2" (U-S)

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:

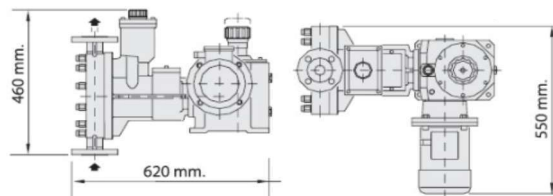
- Casing: Water-Based painting, 50 microns dry thickness (RAL 7001)
- Motor: manufacturer standard color

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 HYDRAULIC DIAPHRAGM METERING PUMP

► Technical data for 50 Hz

PUMP	STROKE PER MIN.	CAPACITY L/H	MAX. BUILT IN RELIEF VALVE SET PRESSURE (bar)	CONNECTIONS	
			A	UNI EN10092-1	ASME B16.5
LP030-X9	40	75	100	20	3/4"
	56	105			
	68	130			
	82	160			
	97	190			
	120	235			
	150	293			
LP040-X9	40	136	100	25	1"
	56	190	100		
	68	232	100		
	82	280	100		
	97	330	100		
	120	415	80		
	150	518	80		
LP050-X9	40	211	60	25	1"
	56	295	60		
	68	360	60		
	82	445	55		
	97	520	50		
	120	650	48		
	150	812,5	48		
LP065-X9	40	358	40	40	1" 1/2
	56	500	40		
	68	610	40		
	82	750	38		
	97	880	35		
	120	1095	30		
	150	1369	30		
LP080-X9	40	547	25	40	1" 1/2
	56	765	25		
	68	930	25		
	82	1130	25		
	97	1335	22		
	120	1660	18		
	150	2075	18		
LP100-X9	40	853	15	40	1" 1/2
	56	1194	15		
	68	1450	15		
	82	1770	13		
	97	2085	12		
	120	2590	11		
	150	3237,5	11		
LP120-X9	40	1229	10	40	2"
	56	1721	10		
	68	2090	10		
	82	2550	10		
	97	3000	9		
	120	3730	8		
	150	4662,5	8		

LP HYDRAULIC DIAPHRAGM METERING PUMP

► Technical data for 50 Hz

PUMP	STROKES PER MIN.	CAPACITY L/H	MAX. BUILT IN RELIEF VALVE SET PRESSURE (bar)		CONNECTION	
					FLANGED	
			U	S	UNI EN10092-1	ASME B16.5
LP080-X9	40	547	12	12	40	2"
	56	765				
	68	930				
	82	1130				
	97	1335				
	120	1660				
	150	2075				
LP100-X9	40	853	12	12	40	2"
	56	1194	12	12		
	68	1450	12	12		
	82	1770	12	12		
	97	2085	12	12	50	
	120	2590	11	11		
	150	3237,5	11	11		
LP120-X9	40	1229	10	10	50	2"
	56	1721	10	10		
	68	2090	10	10		
	82	2550	10	10		
	97	3000	9	9		
	120	3730	8	8		
	150	4662,5	8	8		

Plunger stroke: 50 mm

Indicative weight: 140 Kg

Flow rate adjustment system: manual

Via Micrometric Knob

Oil pre-filled pump

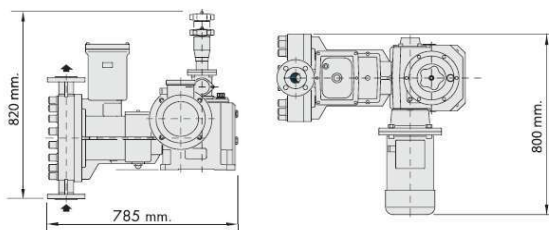
Other strokes available for 60 Hz

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

XS HIGH PRESSURE HYDRAULIC DIAPHRAGM METERING PUMP XS VERSION

► Technical data for 50 Hz

PUMP	TYPES	STROKE PER MIN.	CAPACITY L/H	MAX. BUILT IN RELIEF VALVE SET PRESSURE (bar)
LK	LK010-XS	25	1,8	300
		42	3	
		51	4	
		60	5	
		82	7	
		102	10	
		123	12	
	LK015-XS	25	5,3	300
		42	9	300
		51	11	300
		60	14	270
		82	18	250
		102	22	235
		123	26,5	235
	LK020-XS	25	13,1	170
		42	22	170
		51	27	170
		60	32	160
		82	42	150
		102	52	140
		123	62,7	140
LP	LP020-XS	40	25	300
		56	35	
		68	45	
		82	55	
		97	65	
		120	80	
		150	100	
	LP025-XS	40	45	260
		56	65	260
		68	78	260
		82	92	240
		97	115	220
		120	145	200
		150	181	200
	LP030-XS	40	76	190
		56	107	190
		68	130	185
		82	153	170
		97	185	155
		120	230	140
		150	287,5	140

Plunger stroke: LK = 30mm; LP = 50mm

Flow rate adjustment system: manual Via Micrometric Knob

Oil pre-filled pump

Other strokes available for 60 Hz

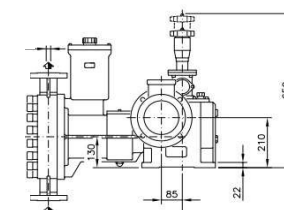
Pumps painted:

- 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

► Overall dimensions

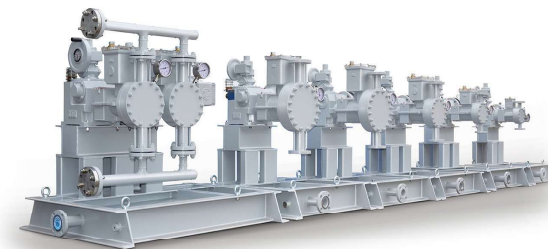
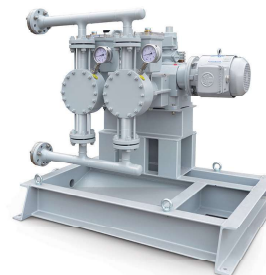


► Material of construction

CODE	LIQUID END	DIAPHRAGM	VALVE SEAT	VALVE BALL	VALVE GUIDE	VALVE SEALS	FLANGE
A9	AISI-316L	PTFE	CERAMIC	RUBY	AISI-316L	FPM	AISI-316L
AA	AISI-316L	PTFE	AISI-316L	AISI-316L	AISI-316L	FPM	AISI-316L
AB	AISI-316L	PTFE	AISI-316L	AISI-316L	AISI-316L	PTFE	AISI-316L
AC	AISI-316L	PTFE	INCOLOY- 825	HAST-C 276	AISI-316L	FPM	AISI-316L
U4	PVC-U	PTFE	PVC-U	PYREX	PP	FPM	PVC-U
U5	PVC-U	PTFE	AISI-316L	AISI-316L	PP	FPM	PVC-U
U6	PVC-U	PTFE	INCOLOY- 825	HAST-C 276	AISI-316L	FPM	AISI-316L
U7	PVC-U	PTFE	CERAMIC	RUBIN	PVC-U	FPM	PVC-U
U8	PVC-U	PTFE	PVC-U	PYREX	PVC-U	FPM	PVC-U
S1	PVDF	PTFE	PVDF	PYREX	PVDF	FPM	PVDF
S2	PVDF	PTFE	PVDF	PYREX	PVDF	FPM	PVDF
S3	PVDF	PTFE	CERAMIC	RUBIN	PVDF	FPM	PVDF

OTHER AVAILABLE OPTIONS

► API675 baseplate



- Painting available until C5
- Painted liquid end
- Steam frontal jacket
- Special liquid end for Sulphur dosing
- Special liquid end with exotic material

► 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

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

FLOWTEC BV
Industrieweg 100
3980 Tessenderlo-Ham
Belgium
Tel. +32 13 67 02 00
info@flowtec.be
www.flowtec.be



FLOWTEC
Straight
to the heart



Member of
Interpump Group