

# Metering Pumps



**OBL**



## The Metering Evolution

**OBL**

OBL

## RBA-RBB BLACKLine



Spring Return

Type	RBA	RBB
L/h	300	300

- Black anodizing Aluminium casing;
- Simple and robust spring return plunger pump;
- Low cost, due to reduced number of components;
- Ideal for metering of mild or non-aggressive fluids.
- Single and multiple arrangement.

RBA	L/h	7	15	20	38	55	90	150	200	300
	bar max	10	10	10	10	10	10	10	9	5
RBB	L/h	5,5	11	30	55	90	150	200	250	300
	bar max	40	40	30	23	12	10	7	5	4

## RCC BLACKPlus



Spring Return

Type	RCC
L/h	300

- Black anodizing Aluminium casing;
- Simple and robust spring return plunger pump;
- Low cost, due to reduced number of components;
- Ideal for metering of mild or non-aggressive fluids;
- ATEX STD compliance (94/9/CE), group II category 2 (zone 1/21) and group II category 3 (zone 2/22).
- Single and multiple arrangement.

RCC	L/h	4	11	20	30	55	90	120	160	200	250	300
	bar max	40	40	40	40	26	12	10	9	8	6	5
RCC TS	L/h	2	2,8	4	5	6	7	10	15	18	-	-
	bar max	100	100	100	100	100	100	100	80	60	-	-

### MECHANISM

### FLOW RATE

### DESCRIPTION

### CHARACTERISTICS

**R**



Spring Return

Type	RH
L/h	620

- Simple and robust spring return plunger pump;
- Low cost, due to reduced number of components;
- Ideal for metering of mild or non-aggressive fluids;
- ATEX STD compliance (94/9/CE), group II category 2 (zone 1/21) and group II category 3 (zone 2/22).

RH	L/h	44	60	64	86	150	176	240	300	410	500	620
	bar max	40	35	32	23	12	10	8	7	5	4	3,5

**L**

**API 675**



Positive Return

Type	LY	LK	LN	LP
L/h	400	1300	3800	5500

- API 675 positive return plunger pump;
- Heavy-duty construction designed for continuous (24 hour) industrial operation;
- Suitable for high pressure applications where accuracy and reliability are essential;
- ATEX STD compliance (94/9/CE), group II category 2 (zone 1/21) and group II category 3 (zone 2/22).
- Multiple pumps arrangement with different sizes, materials and strokes/1'.

LY	L/h	1,5	4,5	6,5	15	20	45	110	175	300	400
	bar max	150	100	100	100	70	40	18	11	8	6,5
LK	L/h	30	48	62	90	165	250	550	850	1000	1300
	bar max	100	90	80	70	35	25	12	7	6	4
LN	L/h	150	230	420	650	900	1500	2150	2700	3200	3800
	bar max	90	50	50	20	16	8	6	5	4	3,5
LP	L/h	230	340	540	750	1100	1800	2500	3200	4500	5500
	bar max	90	80	55	40	27	15	10	9	6	5
LY TS	L/h	2	3	4	5,5	6,5	10	13	-	-	-
	bar max	300	300	300	300	160	150	140	-	-	-
LK TS	L/h	3,5	5	7	10	15	20	25	30	42	-
	bar max	400	400	400	350	230	220	160	140	120	-
LN TS	L/h	14	20	21	26	34	40	48	58	75	105
	bar max	400	400	375	350	260	250	230	200	150	110
LP TS	L/h	48	58	70	75	90	105	135	165	195	-
	bar max	400	370	350	250	230	220	165	160	150	-

## MECHANISM

## FLOW RATE

## DESCRIPTION

## CHARACTERISTICS

## XRN

## BLACKPlus



Spring Return

Type	XRN
L/h	105

- Black anodizing Aluminium casing;
- Technically advanced hydraulic diaphragm spring return pump;
- Combines the simplicity and economics of the spring return with the advantages of the hydraulic diaphragm using an innovative mechanically actuated oil replenishing system;
- Built-in relief valve on the oil circuit to protect the pump against over pressure;
- Can be used in both process and service applications;
- Minimum maintenance required;
- ATEX STD compliance (94/9/CE), group II category 2 (zone 1/21) and group II category 3 (zone 2/22).

XRN	L/h	1,8	2	4,5	6	10	13	20	33	42	50
	bar max	20	35	35	35	35	35	20	15	15	10
L/h	66	87	105	-	-	-	-	-	-	-	
	bar max	8	8	8	-	-	-	-	-	-	

## XL-XLB

## API 675



Positive Return

Type	XL	XLB
L/h	480	430

- Technically advanced hydraulic diaphragm positive return pump (API 675);
- Low cost, due to reduced number of components;
- Built-in relief valve on the oil circuit to protect the pump against over pressure;
- Can be used in both process and service applications;
- Minimum maintenance required;
- ATEX STD compliance (94/9/CE), group II category 2 (zone 1/21) and group II category 3 (zone 2/22).
- Multiple pumps arrangement with different sizes, materials and strokes/1'

XL	L/h	63	105	155	215	260	320	370	430	480
	bar max	15	15	15	15	15	15	14	13	10
XLB	L/h	63	105	155	215	260	320	370	430	-
	bar max	30	30	30	30	30	30	25	20	-

### MECHANISM

### FLOW RATE

### DESCRIPTION

### CHARACTERISTICS

## XLC

## API 675



Positive Return

Type	XLC
L/h	1300

- Technically advanced hydraulic diaphragm positive return pump (API 675);
- Low cost, due to reduced number of components;
- Extreme reliability and durability due to positive return and double hydraulic diaphragm with mechanically actuated replenishing (smart diaphragm);
- Built-in relief valve on the oil circuit to protect the pump against over pressure;
- Can be used in both process and service applications;
- Minimum maintenance required;
- ATEX STD compliance (94/9/CE), group II category 2 (zone 1/21) and group II category 3 (zone 2/22).
- Multiple pumps arrangement with different sizes, materials and strokes/1'

XLC	L/h	350	550	750	920	1150	1300	-	-	-
		bar max	20	20	20	17	15	12	-	-

## X9

## API 675



Positive Return

Type	LY X9	LK X9	LN X9	LP X9
L/h	270	1050	2600	3700

- Double diaphragm process metering pump (API 675);
- Extreme reliability and durability due to positive return and double hydraulic diaphragm with mechanically actuated replenishing (smart diaphragm);
- Seamless ceramic plunger guarantees low NPSHr and minimum maintenance;
- Extreme safety due to built-in relief valve and innovative double diaphragm design;
- SS 316L sandwich diaphragm for operating pressures above 250 barg;
- ATEX STD compliance (94/9/CE), group II category 2 (zone 1/21) and group II category 3 (zone 2/22).

LY X9	L/h	0,5	1,5	3	10	33	15	25	100	170	270
		bar max	125	125	125	125	90	60	40	30	22
LK X9	L/h	49	143	87	211	137	330	230	560	520	1050
		bar max	70	43	40	28	25	18	15	11	10
LN X9	L/h	60	160	230	415	648	500	1050	900	1660	2600
		bar max	100	80	60	32	25	22	16	15	8
LP X9	L/h	90	235	415	295	650	1095	1450	2590	2090	3700
		bar max	100	100	80	60	48	30	15	11	12
LY X9 TS	L/h	2,5	4	6	7	-	-	-	-	-	-
bar max	250	250	250	200	-	-	-	-	-	-	-
LK X9 TS	L/h	3	5	7	9	11	18	22	-	-	-
		bar max	300	300	300	300	270	250	235	-	-
LN X9 TS	L/h	30	35	43	54	63	80	100	120	150	-
		bar max	220	220	220	200	200	180	160	110	100
LP X9 TS	L/h	30	35	42	52	60	76	95	120	185	230
		bar max	350	350	350	350	350	330	310	220	155

### MECHANISM

### FLOW RATE

### DESCRIPTION

### CHARACTERISTICS

## MB-MC

## BLACKLine



Spring Return

Type	MB	MC
L/h	155	420

- Black anodizing Aluminium casing;
- Simple and robust spring return mechanical diaphragm pump;
- Low cost, due to reduced number of components;
- Uses mechanically actuated diaphragm to combine the characteristics of a plunger pump (linear flow rate) with the sealing advantages of a diaphragm pump;
- Suitable for batching operation;
- Minimum maintenance required.
- Single and multiple arrangement.

MB	L/h	11	16	23	31	50	75	101	120	155
	bar max	12	12	12	10	10	8	8	7	7
MC	L/h	100	132	197	260	320	420	-	-	-
	bar max	7	7	7	7	5	5	-	-	-

## MD

## BLACKPlus



Spring Return

Type	MD
L/h	520

- Black anodizing Aluminium casing;
- Simple and robust spring return mechanical diaphragm pump;
- Uses mechanically actuated diaphragm to combine the characteristics of a plunger pump (linear flow rate) with the sealing advantages of a diaphragm pump;
- Suitable for batching operation;
- Minimum maintenance required;
- ATEX STD compliance (94/9/CE), group II category 3 (zone 2/22).
- Single and multiple arrangement.

MD	L/h	1,5	7	11	31	75	101	132	260	320	420	520
	bar max	12	12	12	10	10	10	8	7	6	6	5

### MECHANISM

### FLOW RATE

### DESCRIPTION

### CHARACTERISTICS



## ML



Positive Return

### MECHANISM

### FLOW RATE

Type	MLK	MLN
L/h	1100	2000

### DESCRIPTION

- Positive return mechanical diaphragm pump;
- Combines the construction and reliability of the "L" series (positive return) with the sealing advantages of a diaphragm pump;
- Suitable for duties with flow rates over 520 l/h;
- Minimum maintenance required;
- ATEX STD compliance (94/9/CE), group II category 3 (zone 2/22).
- Single and multiple arrangement.

### CHARACTERISTICS

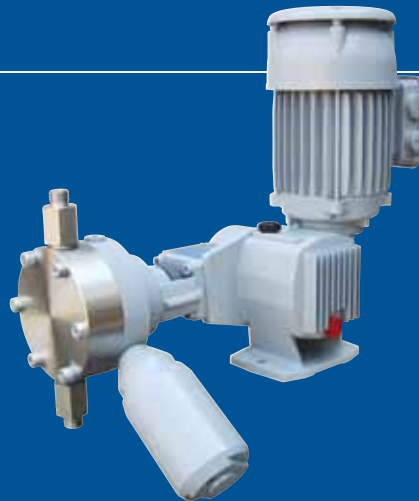
MLK	L/h	360	420	500	600	750	900	1100	-	-	-	-
	bar max	7	7	7	4	4	3	3	-	-	-	-
MLN	L/h	1340	1600	2000	-	-	-	-	-	-	-	-
	bar max	4	4	4	-	-	-	-	-	-	-	-

# Special Solutions

## OM

### OM Pumps - Magnesium oxide slurry dosing

These are designed for dosing diluted **MAGNESIUM OXIDE** slurry into diesel. Working with the manufacturers of the magnesium oxide slurry, since 1980 the **OM** pump has been specifically designed with special wetted materials for this application. It is available with both spring and positive return mechanism (flow rates up to 68 litres per hour, 18 GPH and operating pressures up to 50 bar g, 725 PSI g).



Pump type RB 16 MA 36 OM

5 l/h @ 40 bar g  
spring return mechanism.

## MHN

### MHBN/MHCN Pumps - Filter aid (kieselgur) dosing

OBL is a world leader in the manufacture of metering pumps for **FILTER AIDS**, used for wine, beer and fruit juice filtration. These are diatomaceous earths known as Kieselgur. A range of pumps is available including lip seal plunger pump, mechanical diaphragm and hydraulically actuated diaphragm. These meet the general requirements for flow rates and pressure (100 litres per hour, 26,5 GPH at 10 bar g, 145 PSI g).



Pump type MHBN100 PP

The type of pump that best meets both the technical and economic requirements is the **MHBN/MHCN** versions.

These are specially designed with **PP heads, FDA silicone seals and an AISI 316L seats and balls** coupled with the **OBL unique PTFE mechanical diaphragm**.

## HV

### HV Pumps - High viscosity dosing

Specifically designed to handle high **VISCOSITY PRODUCTS** the HV pumps are available in packed plunger version only with either spring or positive return mechanisms. These pumps are capable of handling products with a viscosity up to 55,000 cP with each head capable of achieving flow rates of up to 150 l/h (40 GPH).



Pump type RCC 16 HV 50 DV

6 l/h 10 bar g.  
Spring return mechanism.

## CN

### CN Pumps - Microdosing

These pumps are designed to handle **EXTREMELY LOW FLOW RATES** where continuous dosing is required. These packed plunger pumps are able to control down to addition levels of 15 ml/h (0.04 GPH) at a maximum pressure of 40 bar g (600 PSI g) due to the unique OBL packed plunger design and the use of exotic materials for valves components.



Pump type RCN 6A 70 TL

500 ml/h max capacity  
40 bar g max pressure  
1% step dial STD manual adjustment.





# Electric Actuator



## ELECTRIC ACTUATOR

All **OBL** pumps, can be equipped with Z type electrical actuator, with following characteristics:

- IP 66 STD (standard)
- Manual emergency override
- Anticondensation heater (on demand)
- Non standard voltages and frequencies
- External automatic/manual selector

Flow rate is adjusted according to following input signals:

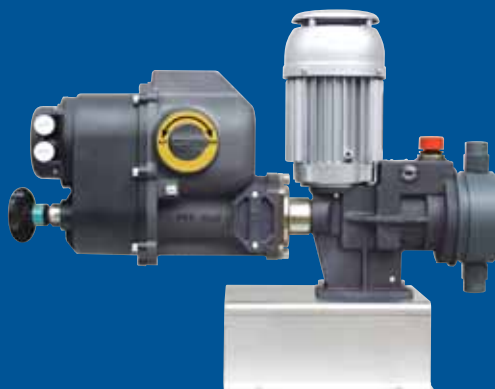
- 4-20 mA, 0-20 mA, 20-4 mA e 0-10 V
- Pulses (0÷2 Hz - 0÷30 Hz)
- RS 485 protocol
- Profibus DP - V Ø



**Z type actuator vertically fitted on XL pump (hydraulic diaphragm to API 675 STD).**



**Z type actuator vertically fitted on LX9 pump (hydraulic diaphragm to API 675 STD).**



**Z type actuator horizontally fitted on XRN pump (hydraulic diaphragm).**



**Detail of Analogical reading (1% steps).**



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