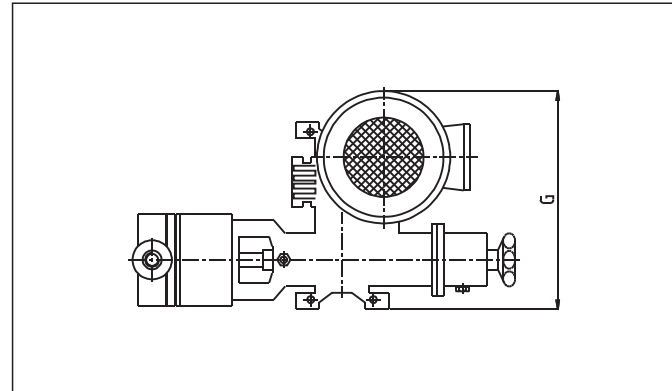


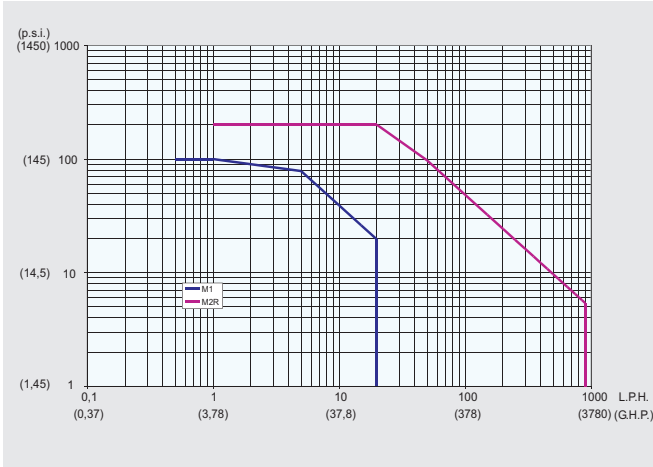
Model	LPH		GPH		Dimensions mm. *)			KG *)
	Min	Max	Min	Max	E **)	H	G	
<b>M1</b>	0,6	17	<b>0,16</b>	<b>4,5</b>	327-360	110	150	5
<b>M2R</b>	1,5	860	<b>0,40</b>	<b>227,5</b>	470-510	152	236	14-26

\*) Without Electric motor

\*\*) Depending on pump head size



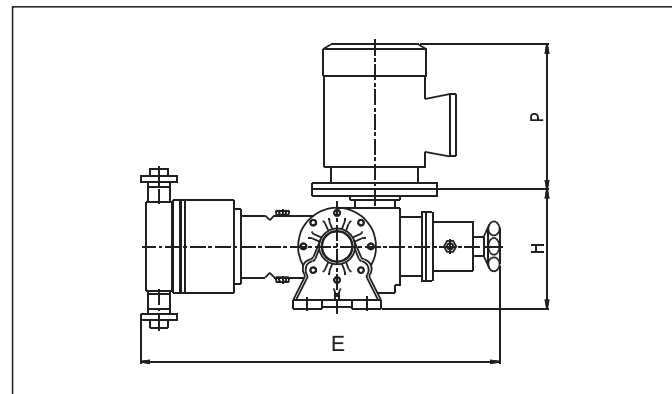
### SECTION TABLE



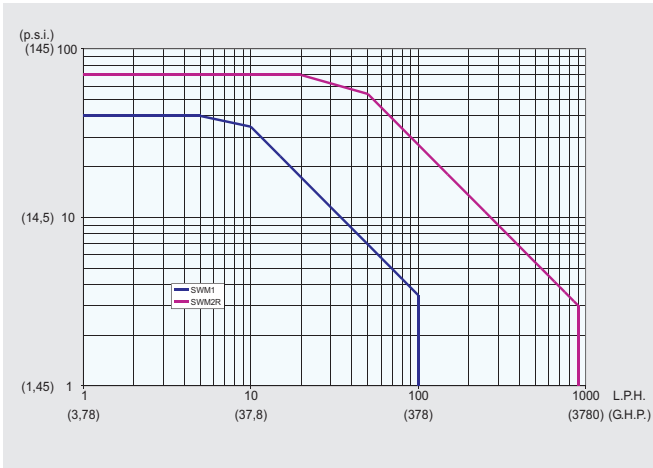
Model	LPH		GPH		Dimensions mm. *)			KG *)
	Min	Max	Min	Max	E **)	H	G	
<b>SWM1</b>	2,4	96	<b>0,6</b>	<b>25,4</b>	370-410	110	150	10-12
<b>SWM2R</b>	9,5	844	<b>2,5</b>	<b>223,3</b>	485-602	152	236	16-37

\*) Without Electric motor

\*\*) Depending on pump head size



### SECTION TABLE



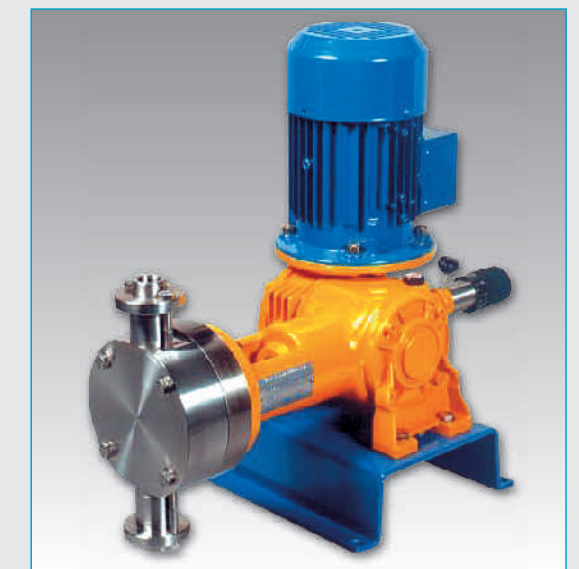
EXACTA  
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Metering pumps

“M”

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EXACTA

# EXACTA



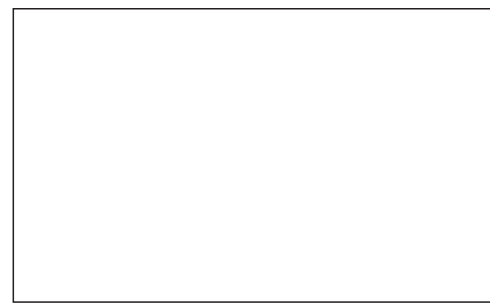
pumps and dosing systems

- Brazil
- France
- Germany
- Italy
- United Kingdom
- Spain
- U.S.A.
- South Africa
- Singapore

# EXACTA

**Seko Bono Exacta S.p.A.**

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Tel: +39-0255302848 - Fax: +39-025471955  
E-mail: [exacta@bono.it](mailto:exacta@bono.it) - Web: [www.bono.it](http://www.bono.it)

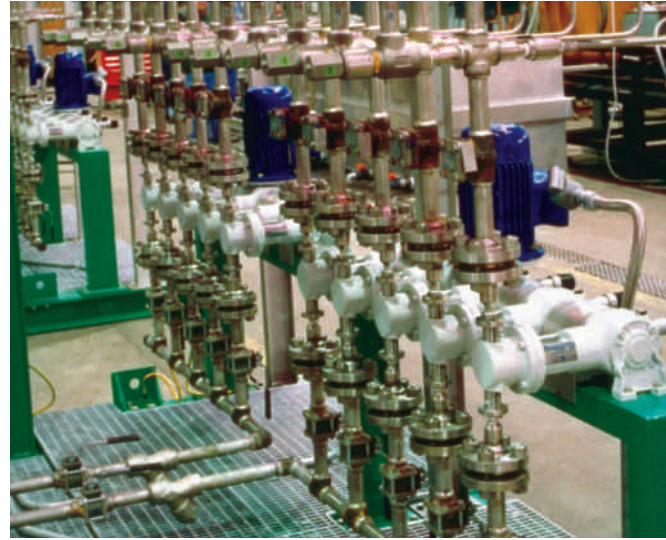


## EXACTA dosing pumps spring return mechanism

Simplicity, reliability and easy-installation are the most evident characteristics of this line, that has a spring return mechanism, plastic or stainless steel pump heads

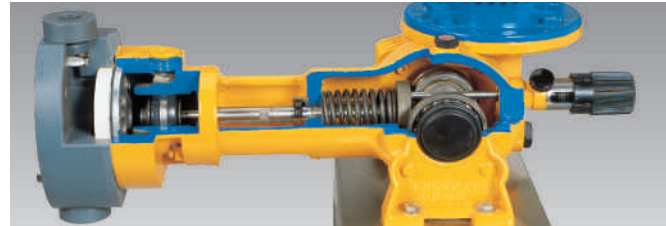
- Stroke adjustment from 0 to 100% running or at rest
- Adjustment locking device
- Electric motors in accordance with European Standards, multi-voltage and multi-frequency, 230-460V/3/50-60Hz, IP55, insulation class F with over-temperature B, ambient temperature -20 +40 °C
- Working temperature 20 +100 °C for stainless steel pump head and 10 +50 °C for plastic pump head
- Duplex" versions

**Options:** single-phase, flameproof or special type



## Mechanism

The mechanism allows to transform the rotational motion of the driving motor into a reciprocating piston movement; the hydrodynamic effect of the oil-bath lubrication provides smooth operation and long-term reliability

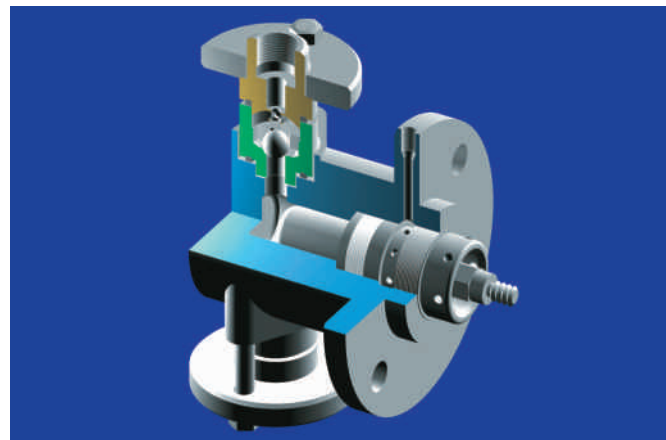


## Plunger piston pump head

Packed plunger liquid ends are made, as a standard, of stainless steel, plungers can be chromium or ceramic coated or completely in ceramic.

Packing can be chosen among a variety of materials: elastomers, PTFE, Kevlar, to match the aggressiveness of the pumped liquid and its temperature; the relevant connections for flushing or drain are available.

The pump head is divided from the driving mechanism by an open space, preventing the pumped liquid to pollute the lubricating oil.

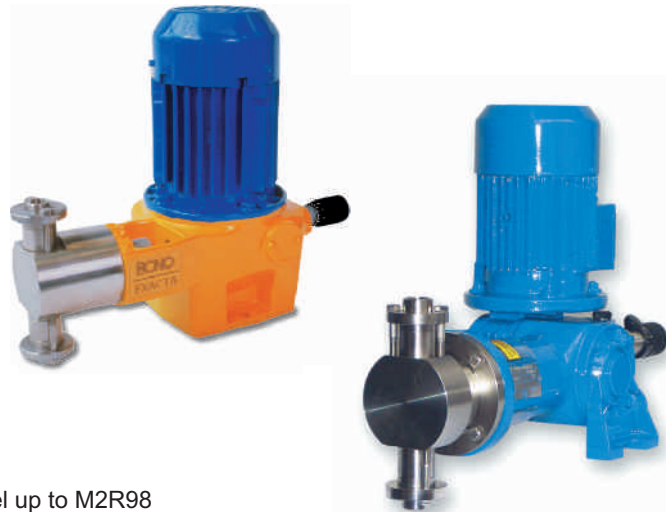


## M1 Series

- Aluminium gearbox, compact and rugged
- Flow rate from 0,6 to 17 l/h, max pressure 100 bar
- Stainless steel pump head
- Single or double balls valves
- PTFE plunger piston seals

## M2R Series

- Cast-iron gearbox, for high performances
- Flow rate from 1,5 to 860 l/h, max pressure 200 bar
- Stainless steel pump head
- Single or double balls valves
- PTFE plunger piston seals up to M2R50 model
- Self-packing elastomer plunger piston seals from M2R49 model up to M2R98

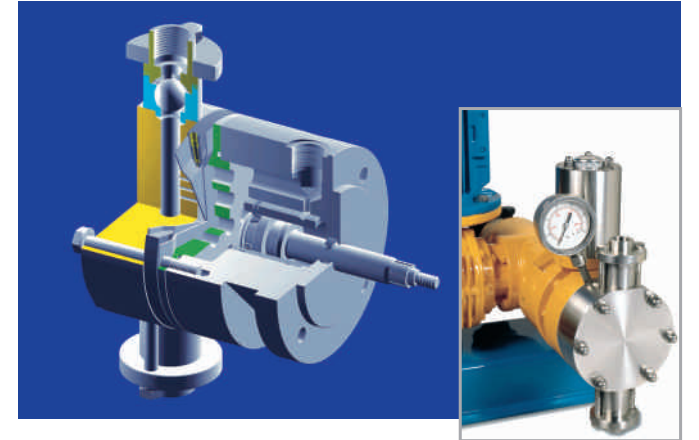


## Hydraulic diaphragm pump head

Joining the advantages of volumetric pumps with the seal-less nature of diaphragms, hydraulic diaphragm pumps offer the solution to many dosing needs, when the pumping conditions and the fluids are hazardous or difficult.

The principle of the **double diaphragm sandwich** type offers several advantages:

- Double barrier between the pumped and the hydraulic fluids.
- The hydraulic fluid could be chosen to be compatible with the pumped medium.



## Diaphragm rupture detection (EFD)

under normal operating conditions, there is no pressure between the two parallel diaphragms. If one of the two diaphragm leaks, an over-pressure is detected. The detection can be visual via a pressure gauge or automatic via a pressure switch.



## SWM1 Serie

- Aluminium gearbox, compact and rugged
- Flow rate from 0,4 to 96/h, max pressure 40bar
- Stainless steel and plastic pump head
- Single or double ball valves
- PTFE diaphragm

## SWM2R Serie

- Cast-iron gearbox, for high performances
- Flow rate from 9,5 to 844 l/h, max pressure 70 bar
- Stainless steel and plastic pump head
- Single or double balls valves
- PTFE diaphragm

## Automatic Flow-rate adjustment

- Electric servomotor, control signal 4+20 mA, 0+10 V.
- Pneumatic positioner, control signal 3+15 p.s.i



## Accessories

Further to the wide pump range, BONO EXACTA can provide a complete series of accessories such as safety, back-pressure and check valves, bag pulsation dampers, slow- and high-speed mixers.





### Dimensions and weight, pumps without motor

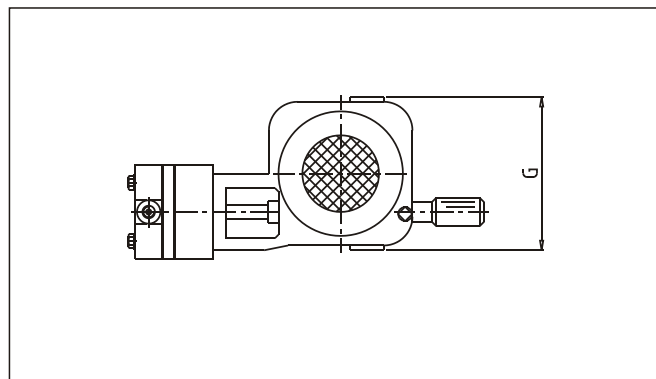
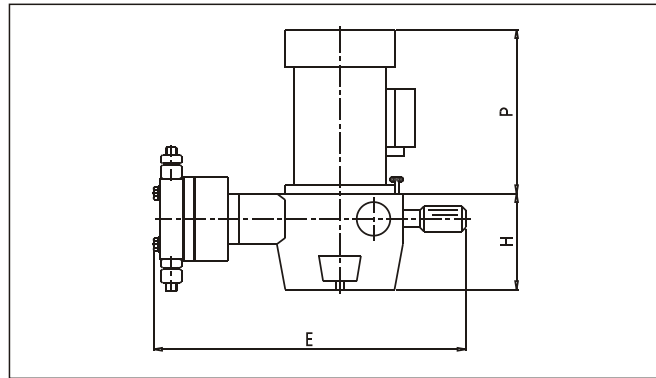
Ø	mm.			Kg.
	E	G	H	
12	370	150	110	11
20	372	150	110	11
28	382	150	110	11
35	405	150	110	12
47	410	150	110	12

Ø	mm.			Kg.
	E	G	H	
15	487	236	152	16,5
26	515	236	152	17
35	515	236	152	17,5
51	521	236	152	18
70	537	236	152	23
86	602	236	152	37
99	602	236	152	37

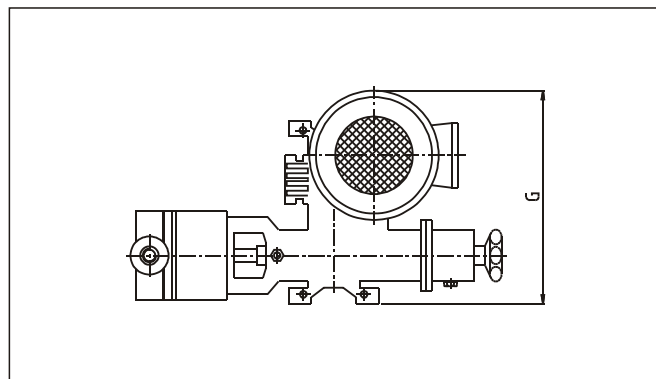
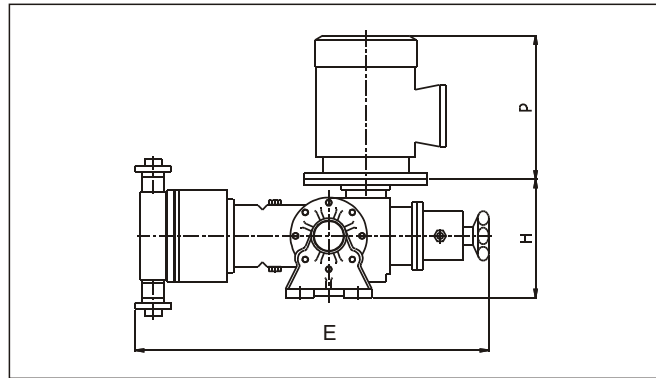
### Dimensions and weight of electric motors

Power kW	0,18	0,37	0,55
Standard P mm	220	230	230
Standard Kg	6	6	17
Eexd P mm	280	290	290
Eexd Kg	12	17	17

SWM1



SWM2R



### Plunger Metering Pumps

Flow rate	0,6/860	l/h	gph	0,2/212,7	<b>M1-M2R</b>
Pressure	200/3	bar	p.s.i.	50,00	

		50 Hz			60Hz			Electric motor kW				Suc/Dis Connec		
		Flow rate at max pressure	Max speed	Flow rate at max pressure	Max speed	0,12 (Y)	0,18 (A)	0,37 (C)	0,55 (D)					
Pump model		lph	gph	Strokes /min	lph	gph	Strokes /min	Max pressure				Ø BSP		
								bar	p.s.i.	bar	p.s.i.		bar	p.s.i.
M 1	6	2 8 4 A	0,6	0,16	50	0,72	0,19	60						1/4" M
M 1	6	1 4 4 A	1,2	0,32	100	1,44	0,38	120			100	1450		1/4" M
M 1	1 2	2 8 4 A	3	0,79	50	3,6	0,95	60			80	1160		1/4" M
M 1	1 2	1 4 4 A	6	1,59	100	7,2	1,9	120			80	1160		1/4" M
M 1	2 0	2 8 4 A	8,5	2,2	50	10,2	2,7	60			30	435		1/4" M
M 1	2 0	1 4 6 Y	10	2,6	61	12,0	3	73	30	435				1/4" M
M 1	2 0	1 4 4 A	17	4,5	100	20,4	5,4	120			30	435		1/4" M
M 2 R	6	2 4 4 C	1,5	0,40	59	1,8	0,48	71			200	2900		1/4" M
M 2 R	6	1 8 4 C	2,0	0,53	78	2,4	0,63	94			200	2900		1/4" M
M 2 R	6	1 4 4 C	2,6	0,69	100	3,1	0,83	120			200	2900		1/4" M
M 2 R	6	2 4 2 C	3,1	0,82	117	-	-	-			200	2900		1/4" M
M 2 R	8	2 4 4 C	2,7	0,71	59	3,2	0,86	71			200	2900		1/4" M
M 2 R	8	1 8 4 C	3,7	0,98	78	4,4	1,2	94			200	2900		1/4" M
M 2 R	8	1 4 4 C	4,7	1,24	100	5,6	1,5	120			200	2900		1/4" M
M 2 R	8	2 4 2 C	5,5	1,46	117	-	-	-			200	2900		1/4" M
M 2 R	1 2	2 4 4 C	7,2	1,90	59	8,6	2,3	71			200	2900		1/4" M
M 2 R	1 2	1 8 4 C	9,6	2,54	78	11,5	3,0	94			200	2900		1/4" M
M 2 R	1 2	1 4 4 C	12,2	3,23	100	14,6	3,9	120			200	2900		1/4" M
M 2 R	1 5	2 4 4 C	11,5	3,04	59	13,8	3,7	71			200	2900		1/4" F
M 2 R	1 5	1 8 4 C	15,2	4,02	78	18,2	4,8	94			167	2422		1/4" F
M 2 R	1 5	1 4 4 C	19,5	5,16	100	23,4	6,2	120			130	1885		1/4" F
M 2 R	2 5	2 4 4 C	32,4	8,6	59	38,9	10,3	71			80	1160		3/8" F
M 2 R	2 5	1 8 4 C	42,8	11,3	78	51,4	13,6	94			60	870		3/8" F
M 2 R	2 5	1 4 4 C	55	14,6	100	66,0	17,5	120			47	682		3/8" F
M 2 R	3 5	2 4 4 C	64	17	59	76,8	20,3	71			40	580		3/8" F
M 2 R	3 5	1 8 4 C	85	22	78	102	27,0	94			31	450		3/8" F
M 2 R	3 5	1 4 4 C	109	29	100	130,8	34,6	120			24	348		3/8" F
M 2 R	3 5	2 4 2 D	127	34	117	-	-	-					31 450	3/8" F
M 2 R	5 0	2 4 4 C	130	34,4	59	156	41,3	71			20	290		1/2" F
M 2 R	5 0	1 8 4 C	173	45,8	78	207,6	54,9	94			15	218		1/2" F
M 2 R	5 0	1 4 4 C	221	58,5	100	265,2	70,2	120			12	174		1/2" F
M 2 R	5 0	2 4 2 D	259	68,5	117	-	-	-			15	218		1/2" F
M 2 R	4 9	2 4 4 C	127	33,6	59	152	40,3	71			20	290		1/2" F
M 2 R	4 9	1 8 4 C	168	44,4	78	202	53,3	94			16	225		1/2" F
M 2 R	4 9	1 4 4 C	216	57,1	100	259	68,6	120			12	174		1/2" F
M 2 R	4 9	2 4 2 D	253	66,9	117	-	-	-					16 226	1/2" F
M 2 R	6 3	2 4 4 C	214	56,6	59	257	67,9	71			12	174		1/2" F
M 2 R	6 3	1 8 4 C	282	74,6	78	338	89,5	94			9,3	135		1/2" F
M 2 R	6 3	1 4 4 C	362	95,8	100	434	114,9	120			7,3	106		1/2" F
M 2 R	6 3	2 4 2 D	424	112,2	117	-	-	-					9,4 136	1/2" F
M 2 R	8 6	2 4 4 C	390	103	59	468	124	71			6,6	96		3/4" F
M 2 R	8 6	1 8 4 C	515	136	78	618	163	94			5	73		3/4" F
M 2 R	8 6	1 4 4 C	660	175	100	792	210	120			4	58		3/4" F
M 2 R	8 6	2 4 2 D	773	204	117	-	-	-					5,1 74	3/4" F
M 2 R	9 8	2 4 4 C	507	134	59	608	161	71			5	72,5		1" F
M 2 R	9 8	1 8 4 C	670	177	78	804	212,7	94			4	58		1" F
M 2 R	9 8	1 4 4 C	860	228	100	-	-	-			3	43,5		1" F

LEGENDA

Motor code	Motor poles	Reduction ratio	Packing: T=PTFE N=NBR V=FPM	Pump head S=316L	Piston diameter	Pump model
------------	-------------	-----------------	-----------------------------	------------------	-----------------	------------

Executions	Contact parts materials						
	Type	Bar Max	Pumphead	Plunger	Packing	Valves	Seats
STA	40		316L	316L	PTFE	316L	316L
STB	80		316L	316L	PTFE	316L	316L
SBB	200		316L	Hardened	Kevlar	316L	316L
SNA	Low		316L	316L	NBR	316L	316L
SVA	Pressure		316L	316L	FPM	316L	316L
ESP	Special executions						

### Dimensions and weight, pumps without motor

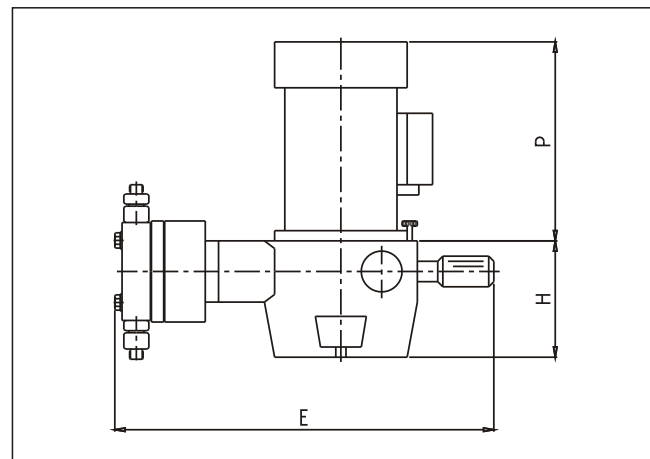
M1 Ø	mm.			Kg.
	E	G	H	
6	327	150	110	5
12	327	150	110	5
20	327	150	110	5

M2R Ø	mm.			Kg.
	E	G	H	
6	470	236	152	14
8	470	236	152	14,5
12	470	236	152	15
15	470	236	152	15
25	470	236	152	16
35	470	236	152	17
49	470	236	152	18
50	470	236	152	18
63	470	236	152	18
86	470	236	152	25
98	470	236	152	26

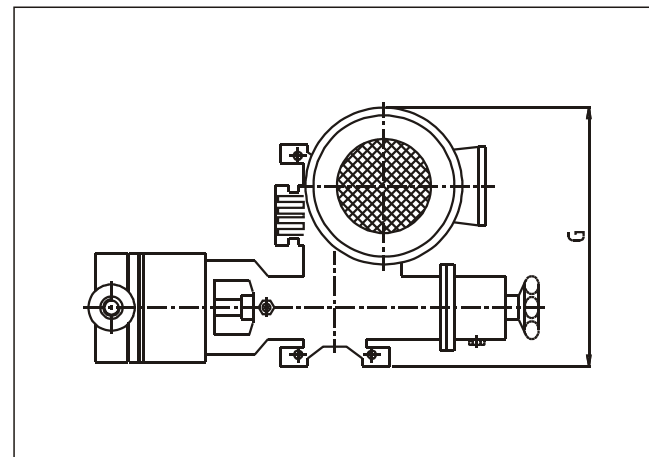
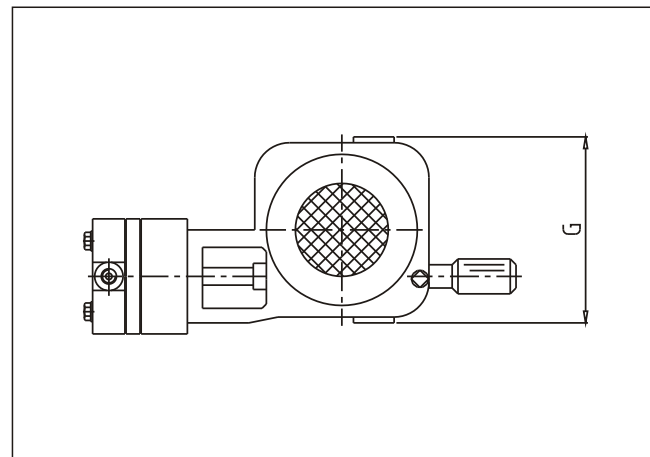
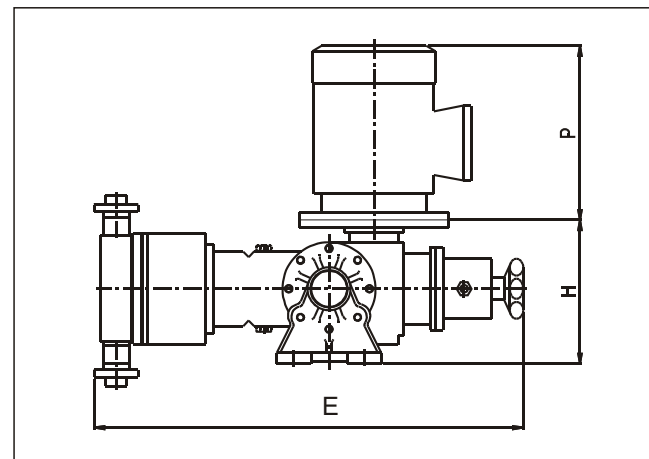
### Dimensions and weight of electric motors

Power kW	0,12	0,18	0,37	0,55	
Standard	P mm	220	220	230	230
	Kg	6	6	6	17
Eexd	P mm	280	280	290	290
	Kg	12	12	17	17

M1



M2R



### Hydraulic Diaphragm Metering Pumps

Flow rate	2,5/844	l/h	gph	0.66/208.9	<b>SWM1-SWM2R</b>
Pressure	70/2,7	bar	p.s.i	1015/3.5	

Pump model	50 Hz			60Hz			Electric Motor kW				Suction/Discharge Connections	
	lph	gph	Strokes /min	lph	gph	Strokes /min	0,18 (A)	0,37 (C)	0,55 (D)	Ø BSP	Ø BSP	
SWM 1 1 2	2,5	0,66	50	3	0,8	60	40	580			1/4"M	3/8"F
SWM 1 1 2	5,0	1,32	100	6	1,6	120	40	580			1/4"M	3/8"F
SWM 1 2 0	8	2,12	50	9,6	2,5	60	27	392			1/4"M	3/8"M
SWM 1 2 0	16,0	4,23	100	19,2	5,1	120	27	392			1/4"M	3/8"M
SWM 1 2 8	15,7	4,15	50	18,84	5,0	60	13	189			1/4"F	3/8"M
SWM 1 2 8	31,5	8,33	100	37,8	10,0	120	13	189			1/4"F	3/8"M
SWM 1 3 5	24,5	6,48	50	29,4	7,8	60	8,2	119			1/4"F	3/8"F
SWM 1 3 5	49,0	12,96	100	58,8	15,6	120	8,2	119			1/4"F	3/8"F
SWM 1 4 7	48	12,7	50	57,6	15,2	60	4,5	65,3			1/4"F	3/8"F
SWM 1 4 7	96	25,4	100	115,2	30,5	120	4,5	65,3			1/4"F	3/8"F

SWM 2 R 1 5	2 4 4 C	9,5	2,5	59	11,4	3	71		70	1015			1/4"M	3/8"M
SWM 2 R 1 5	1 8 4 C	12,5	3,3	78	15	4	94		60	870			1/4"M	3/8"M
SWM 2 R 1 5	1 4 4 C	16,1	4,3	100	19,3	5,1	120		60	870			1/4"M	3/8"M
SWM 2 R 1 5	2 4 2 D	18,7	4,9	117	-	-	-				60	870	1/4"M	3/8"M
SWM 2 R 2 6	2 4 4 C	33	8,7	59	40	10,5	71		65	942,5			1/4"F	3/8"F
SWM 2 R 2 6	1 8 4 C	44	11,6	78	53	14	94		51	739,5			1/4"F	3/8"F
SWM 2 R 2 6	1 4 4 C	57	15,1	100	68	18,1	120		40	580			1/4"F	3/8"F
SWM 2 R 2 6	2 4 2 D	66	17,5	117	-	-	-				51	406	1/4"F	3/8"F
SWM 2 R 3 5	2 4 4 C	61	16,1	59	73	19,4	71		36	522			1/2"F	3/8"F
SWM 2 R 3 5	1 8 4 C	80	21,2	78	96	25,4	94		28	406			1/2"F	3/8"F
SWM 2 R 3 5	1 4 4 C	103	27,2	100	124	32,7	120		22	319			1/2"F	3/8"F
SWM 2 R 3 5	2 4 2 D	120	31,7	117	-	-	-				28	406	1/2"F	3/8"F
SWM 2 R 5 1	2 4 4 C	130	34,4	59	156	41,3	71		17	246,5			1/2"F	1/2"F
SWM 2 R 5 1	1 8 4 C	172	45,5	78	206	54,6	94		13	188,5			1/2"F	1/2"F
SWM 2 R 5 1	1 4 4 C	221	58,5	100	265	70,2	120		10	145			1/2"F	1/2"F
SWM 2 R 5 1	2 4 2 D	259	68,5	117	-	-	-				13	189	1/2"F	1/2"F
SWM 2 R 7 0	2 4 4 C	247	65,3	59	296	78,4	71		9	130,5			3/4"F	1"F
SWM 2 R 7 0	1 8 4 C	327	86,5	78	392	103,8	94		7	101,5			3/4"F	1"F
SWM 2 R 7 0	1 4 4 C	419	110,8	100	503	133,0	120		5,4	78,3			3/4"F	1"F
SWM 2 R 7 0	2 4 2 D	491	129,9	117	-	-	-				7	102	3/4"F	1"F
SWM 2 R 8 6	2 4 4 C	375	99,2	59	450	119,0	71		6	87			1"F	1"F
SWM 2 R 8 6	1 8 4 C	496	131,2	78	595	157,5	94		4,6	66,7			1"F	1"F
SWM 2 R 8 6	1 4 4 C	637	168,5	100	764	202,2	120		3,6	52,2			1"F	1"F
SWM 2 R 8 6	2 4 2 D	745	197,1	117	-	-	-				4,6	67	1"F	1"F
SWM 2 R 9 9	2 4 4 C	498	131,7	59	598	158,1	71		4,5	65,3			1"F	1"F
SWM 2 R 9 9	1 8 4 C	658	174,1	78	790	208,9	94		3,5	50,8			1"F	1"F
SWM 2 R 9 9	1 4 4 C	844	223,3	100	-	-	-		2,7	39			1"F	1"F

### LEGENDA

Motor code	Esecutions		Contact parts materials				
	Type	Bar Max	Pumphead	Plunger	Packing	Valves	Seats
Motor poles	PTTA	10	PP	PTFE	PP	Pyrex	PTFE
Reduction ratio	PTTB	10	PP	PTFE	PP	Pyrex	PTFE
A= single valves B= double valves	STTA	40	316L	PTFE	316L	316L	316L
Diaphragm T=PTFE	STTB	80	316L	PTFE	316L	316L	316L
Pump head S=316L							
Piston diameter	PESP	Plastic special executions					
Pump model	SESP	Stainless steel special executions					