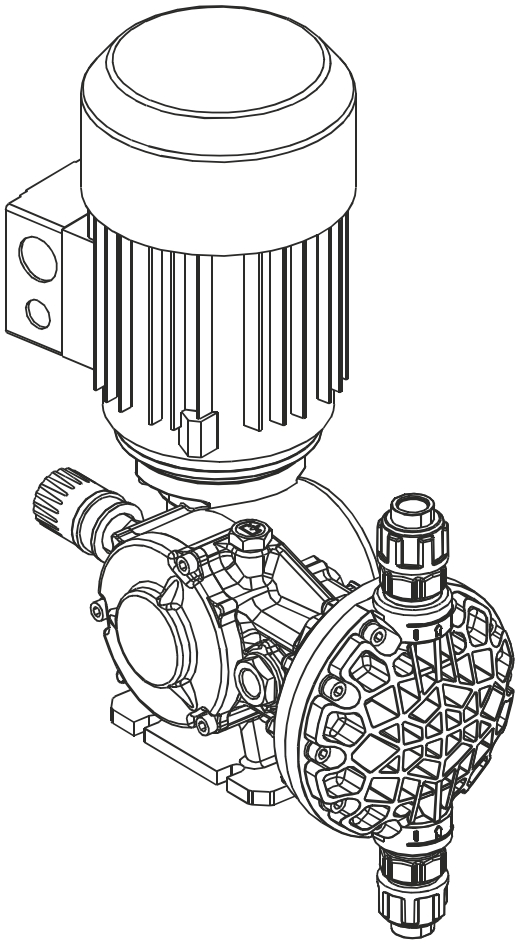
DOSING PUMP

MS1 SERIES- Mechanical diaphragm pump



Technical characteristics

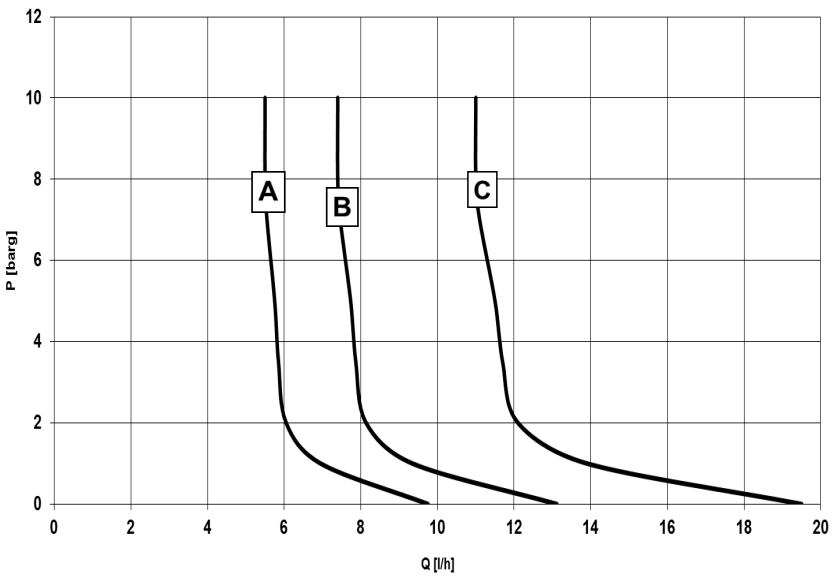
- Flow rates: from 5.5 to 500 l/h
- Max Pressure: up to 10 bar (145 psi)
- Motor:
  - 0.18 kW - 3 ph (IP55)
  - 0.25 kW - 3 ph or 1 ph (IP55)
  - 0.37 kW - 3 ph or 1 ph(IP55)
  - 0.55 kW - 1 ph (IP55)
- Stroke rate: 58 – 78 – 116 strokes/minute
- Stroke length: 2 – 4 – 6 mm
- Diaphragm diameter: from 64 to 165 mm
- Pump head:
  - SS 316 L
  - PP
  - PVC
  - PVDF
- Max. dosing temperature:
  - SS 316 L 40° C
  - PP 40° C
  - PVC 40° C
  - PVDF 40° C
- Range of ambient temperature of use:
  - 5 ÷ 40° C

Seko mechanical diaphragm metering pump MS1 Series has a wide range product. MS1 Series performances cover s from 5.5 to 500 l/h with a back pressure up to 10 bar, having several configurations available for the pump head and power, in order to have the characteristics most suitable for processes where required.

MS1pump have a spring return mechanism into an aluminum housing.

Each model has 3 values of stroke rate, which can be set manually or automatically using a linear actuator which accepts a signal 4 – 20 mA. Moreover they can be supplied with a 3 phases or 1 phase electric motor with protection class IP55.

Curve Q-p MS1

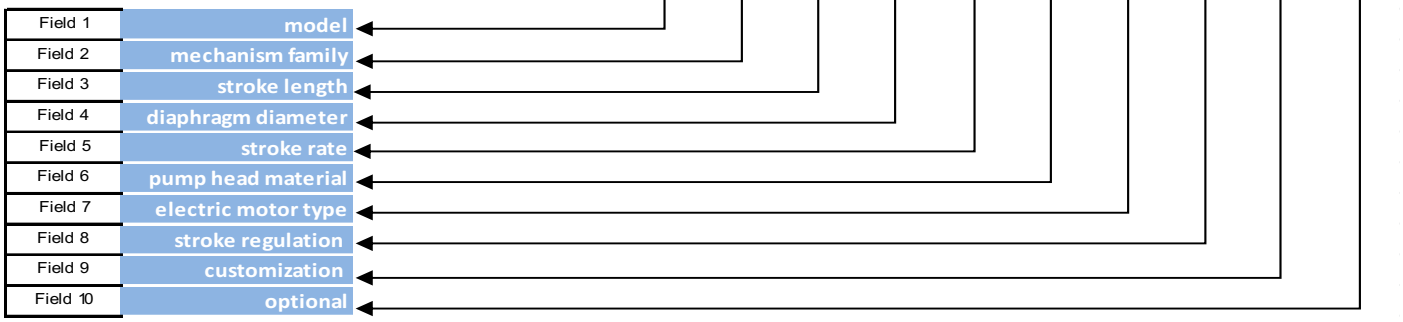


DOSING PUMP

MS1 SERIES- Mechanical diaphragm pump

PUMP KEY CODE

Field 1	Field 2	Field 3	Field 4	Field 5	Field 6	Field 7	Field 8	Field 9	Field 10
M	S1	B	094	A	51	C4	0	0	0



Field 1 – model

M	***Diaphragm***

Field 2 – mechanism family

S1	*Membrane*

Field 3 – stroke length

A	*2 [mm]*
B	*4*
C	*6*

Field 4 – diaphragm diameter

064	*64 [mm]*
094	*94*
108	*108*
138	*138*
165	*165*

Field 5 – stroke rate

A	*58 [stroke/1']*
B	*78*
C	*116*

Field 6 – pump head material

	head	*diaphragm*	*valves*	*seat valves*	*O-Ring*	
21	SS316	PTFE	SS316	SS316	FPM	*on Ø 64*
31	PVC		CERAMIC	PTFE	FPM	*on Ø 94 - 108*
51	PP		CERAMIC	PTFE	FPM	*on Ø 94 - 108*
24	SS316	PTFE	SS316	SS316	EPDM	*on Ø 64*
41	PVDF		CERAMIC	PVDF	FPM	*on Ø 94 - 108*
52	PP		SS316	SS316	FPM	*on Ø 94 - 108*

Field 7 – electric motor type

A4	*0,18 kW (4 poles - 3phases 230-400 Vac 50/60 Hz - size 63-B14)*
B4	*0,25 kW (4 poles - 3phases 230-400 Vac 50/60 Hz - size 71-B14)*
C4	*0,37 kW (4 poles - 3phases 230-400 Vac 50/60 Hz - size 71-B14)*
H4	*0,25 kW (4 poles - 1phase 230 Vac 50 Hz - size 71-B14)*
I4	*0,37 kW (4 poles - 1phase 230 Vac 50 Hz - size 71-B14)*
L4	*0,55 kW (4 poles - 1phase 230 Vac 50 Hz - size 80-B14)*
AI	*0,18 kW (4 poles - 3phases 230-400 Vac 50/60 Hz - size 63-B14 - with INVERTER)*
BI	*0,25 kW (4 poles - 3phases 230-400 Vac 50/60 Hz - size 71-B14 - with INVERTER)*
CI	*0,37 kW (4 poles - 3phases 230-400 Vac 50/60 Hz - size 71-B14 - with INVERTER)*
S0	*WITHOUT motor*

Field 8 – stroke regulation

0	*Manual with adjustment knob - STANDARD*
L	*Automatic Linear Actuator AKTUA series*

Field 9 – customization

0	*Standard*
H	*High Pressure*

Field 10 – optional

0	*Standard*
2	*(S0 - WHITOUT motor) + adapter kit*

HYDRAULIC CHARACTERISTICS

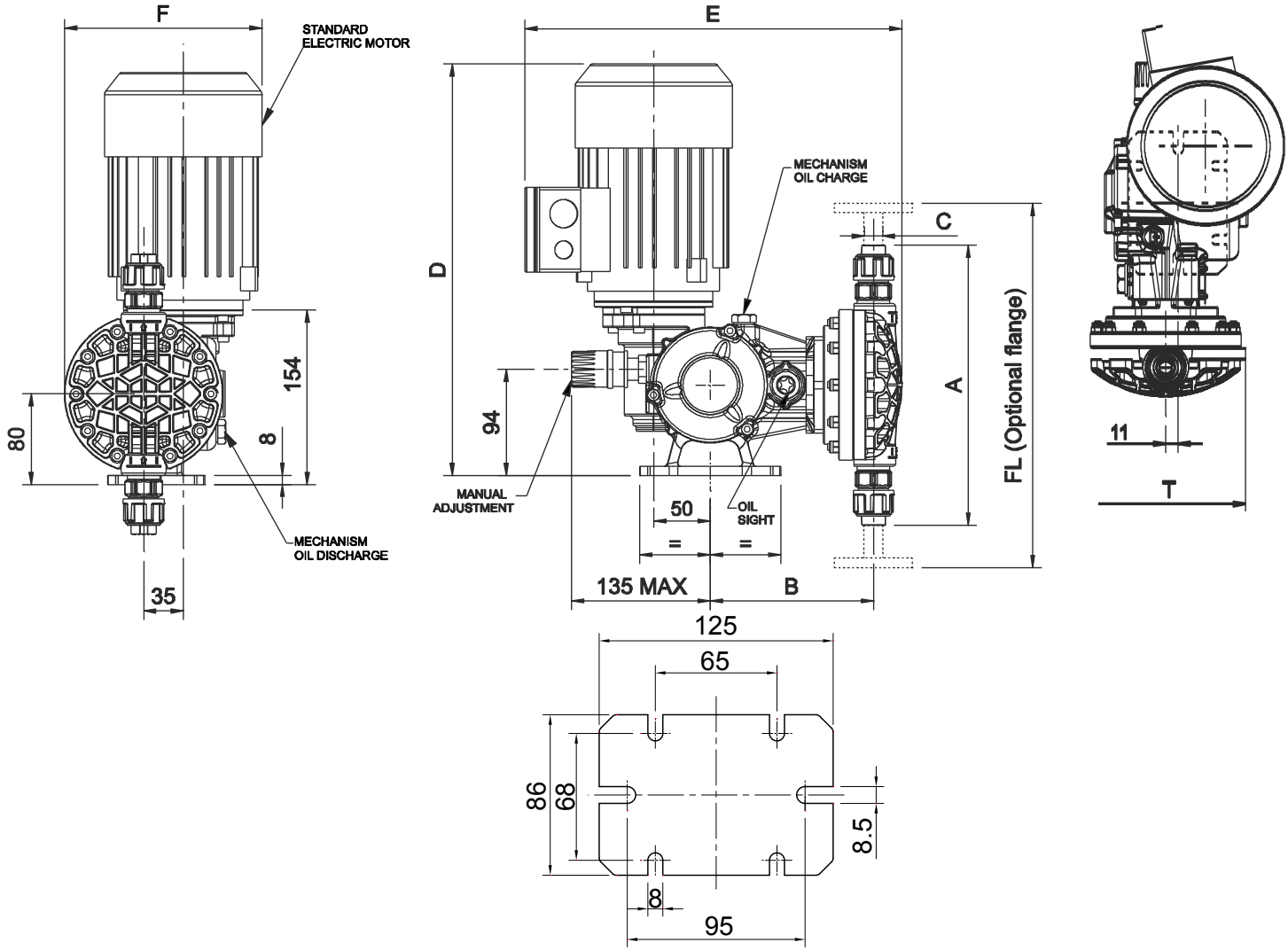
Pump Model	Diaphragm Diameter [mm]	Stroke/min	Flow rate		Max back pressure				Suction/Discharge Connection		Electric Motor 50 Hz 3 phases [kW]
					bar		p.s.i.				
			l/h	gl/h	SS 316	PP	SS 316	PP	SS 316	PP	
M S 1 A 0 6 4 A	64	58	5.5	1.45	16	10*	232	145*	1/4" G F	1/4" G F	0,18 (A4)
M S 1 A 0 6 4 B		78	8	2.12							
M S 1 A 0 6 4 C		116	11	2.91							
M S 1 A 0 9 4 A	94	58	20	5.59	16	10*	232	145*	3/8" G F	1/4" G F	0,25 (B4)
M S 1 A 0 9 4 B		78	26	6.88							
M S 1 A 0 9 4 C		116	40	10.58							
M S 1 B 1 0 8 A	108	58	60	15.87	10	10	145	145	3/8" G F	3/8" G F	0,37 (C4)
M S 1 B 1 0 8 B		78	80	21.16							
M S 1 B 1 0 8 C		116	120	31.75							
M S 1 C 1 3 8 A	138	58	155	41	7	7	101	101	3/4" G F	3/4" G F	0,37 (C4)
M S 1 C 1 3 8 B		78	220	58.2					3/4" G F	3/4" G F	
M S 1 C 1 3 8 C		116	310	82					1" G F	1" G F	
M S 1 C 1 6 5 A	165	58	230	60.85	5	5	72.5	72.5	1" G F	1" G F	0,37 (C4)
M S 1 C 1 6 5 B		78	330	87.30	5	5	72.5	72.5			
M S 1 C 1 6 5 C		116	500	132.3	3	3	43.5	43.5			

*** Available with special reinforced pump head for use with pressure up to 16 bar - 14° Field (Optional) in the Key Code identified by "H"**

PUMP HEAD MATERIAL

Material	Standard			Special	
	21	31	51	41	52
Pump Head	SS 316	PVC	PP	PVDF	PP
Diaphragm	PTFE	PTFE	PTFE	PTFE	PTFE
Valves	SS 316	Ceramic	Ceramic	Ceramic	SS 316
Seat Valves	SS 316	PTFE	PTFE	PVDF	SS 316

DIMENSIONS



Material Pump Head	Pump Model	DIMENSIONS [mm]					3 PHASE					1 PHASE				
		A	FL	B	C	T	P kW	Size	D mm	E mm	F mm	P kW	Size	D mm	E mm	F mm
AISI 316 (21)	MS1A*064	192	292	144	1/4" G F	98	0.18	63 B14	333	321	146	0.37	71B14	371	343	155
	MS1A*094	172	272	146	3/8" G F	118	0.25	71 B14	371	335	165	0.37	71B14	371	346	165
	MS1A*108	213	313	148	3/8" G F	138	0.37	71 B14	371	337	175	0.55	80B14	396	379	184
	MS1A*138	261	361	158	3/4" G F - 1" G F	168	0.37	71 B14	371	352	190	0.75	80B14	396	394	199
	MS1A*165	297	397	165	1" G F	188	0.37	71 B14	371	372	200	0.75	80B14	396	414	209
PP (42-51-52) PVC (31) PVDF (41)	MS1A*064	239	439	149	1/4" G F	98	0.18	63 B14	333	326	146	0.37	71B14	371	348	155
	MS1A*094	242	442	144	3/8" G F	124	0.25	71 B14	371	340	168	0.37	71B14	371	351	168
	MS1A*108	250	450	147	3/8" G F	142	0.37	71 B14	371	343	177	0.55	80B14	396	385	186
	MS1A*138	347	547	159	3/4" G F - 1" G F	166	0.37	71 B14	371	364	189	0.75	80B14	396	406	198
	MS1A*165	375	575	172	1" G F	195	0.37	71B14	371	374	214	0.75	80B14	396	416	223

*** With the stroke length identified with letter A, B, C, the dimensions still remain the same**