



# MEMDOS KMS

## Motor piston diaphragm dosing pump



### Versatile and flexible

During the development of the MEMDOS KMS, a focus was placed on ensuring the following advantages for the user:

#### Ease of installation

- Quick diaphragm change possible
- No zero-point correction with dismantling of the piston flange required.

#### High flexibility

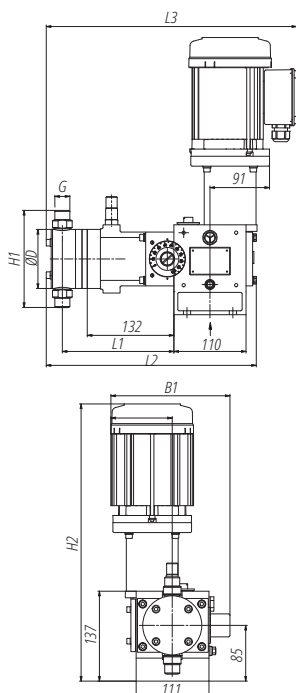
- The rational structure requires only a minimum of spare parts storage
- The addition of a second dosing unit to the drive with an identical or different capacity range produces a double head pump, the MEMDOS ZKMS.
- Thanks to its symmetrical form, the piston flange can be installed on the left-hand or right-hand side of the simple pump. This ensures an economical and compact system design.
- Due to the installation of only four stud bolts, the dosing pump can be converted from manual stroke adjustment to electrical stroke adjustment.
- For operation, motors with a multi-range voltage (220 – 240/380 – 420 V, 50 Hz; 440 – 480 V 60 Hz), a high protection class (IP55) and a high insulation class (F) are used. Special motors (ATEX) on request.
- TÜV-checked pressure relief valves are integrated in all pumps; these prevent damage to the pump and the periphery. The pressure relief valves have been selected to match the pump capacity and the desired maximum pressure in the system.

**safety is our concern**

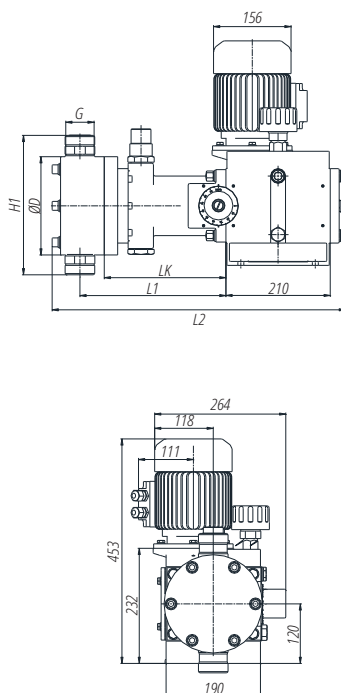
# Dimensions

All dimensions in mm

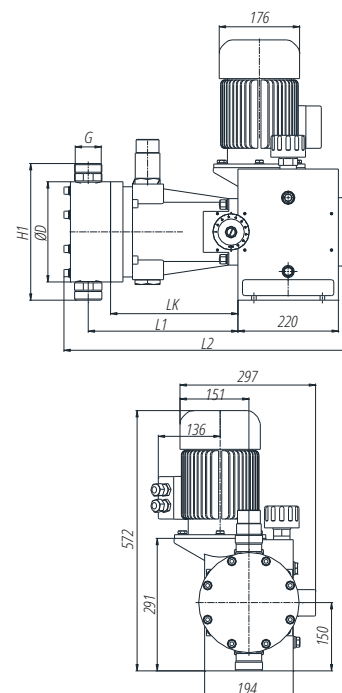
MEMDOS KMS 6 – 100 and 140  
MEMDOS KMS-V 12, 20 and 50



MEMDOS KMS 137 and 272 – 582  
MEMDOS KMS-V 137 and 175



MEMDOS KMS 582-HP – 1536  
MEMDOS KMS-V 235 – 640



MEMDOS KMS, KMS-HP	Piston-Ø	L1	L2	L3	H1	H2	B1	ØD	G
6, 9-HP, 12, 24, 24-HP	14 – 20	170	320 approx.	382 approx.	148	423 approx.	182 approx.	90	G5/8
46	27	183	333 approx.	387 approx.	168	423 approx.	182 approx.	110	G5/8
80, 100, 140	37 – 45	192	354 approx.	407 approx.	166	423 approx.	182 approx.	110	G1 1/4

MEMDOS KMS, KMS-HP	Piston-Ø	L1	L2	LK	H1	ØD	G
137	32	272	557 (555**) approx.	240	196	150	G1 1/4
272	45	275	562 (560**) approx.	245	204	150	G1 1/4
350	52	280	562 (560**) approx.	245	232	178	G1 1/4
490, 582	58 – 65	294	597 (595**) approx.	245	281	198	G2
582-HP	65	294	697 (695*)	245	281	198	G2
882, 1058	80	328	629 (627**)	279	300	220	G2
1280, 1536	95	336	643 (641**)	281	331	250	G2

MEMDOS KMS-V	Piston-Ø	L1	L2	L3	H1	H2	B1	ØD	G
12-V	27	183	345 approx.	407 approx.	164	300 approx.	172 approx.	110	G1 1/4
20-V	37	190	365 approx.	436 approx.	200	300 approx.	172 approx.	120	G2
50-V	45	190	365 approx.	436 approx.	208	320 approx.	180 approx.	130	G2

MEMDOS KMS-V	Piston-Ø	L1	L2	LK	H1	ØD	G
137-V	45	290	584 approx.	240	228	150	G2
175-V	52	290	584 approx.	245	256	178	G2
235-V, 291-V	58 – 65	294	697 (695*)	245	278	198	G2
440-V	80	328	629 (627**)	279	298	220	G2
640-V	95	336	643 (641**)	281	330	250	G2

\*) p > 10 bar, PVC/PVDF

\*\*) with stainless steel dosing head

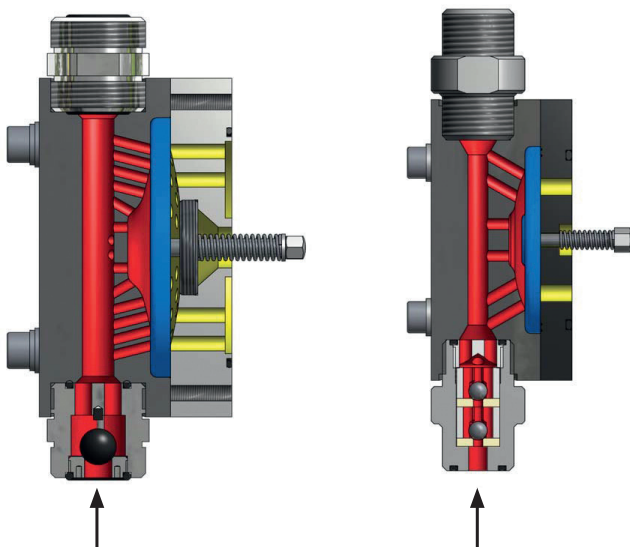
# Voltage supply

MEMDOS KMS, KMS-HP	6	9-HP	12	24	24-HP	46	80	100	140	137
400 V 3ph 50 Hz 0.18 kW	•	•	•	•	•	•	•	•	•	
460 V 3ph 60 Hz 0.21 kW	•	•	•	•	•	•	•		•	
400 V 3ph 50 Hz 0.55 kW										•
460 V 3ph 60 Hz 0.65 kW										•
Protection class	IP55									
Insulation class	F									

MEMDOS KMS, KMS-HP	272	350	490	582	582-HP	882	1058	1280	1536	
400 V 3ph 50 Hz 0.55 kW	•	•	•	•						
460 V 3ph 60 Hz 0.65 kW	•	•	•	•						
400 V 3ph 50 Hz 1.1 kW					•	•	•	•	•	
460 V 3ph 60 Hz 1.3 kW					•	•		•		
Protection class	IP55									
Insulation class	F									

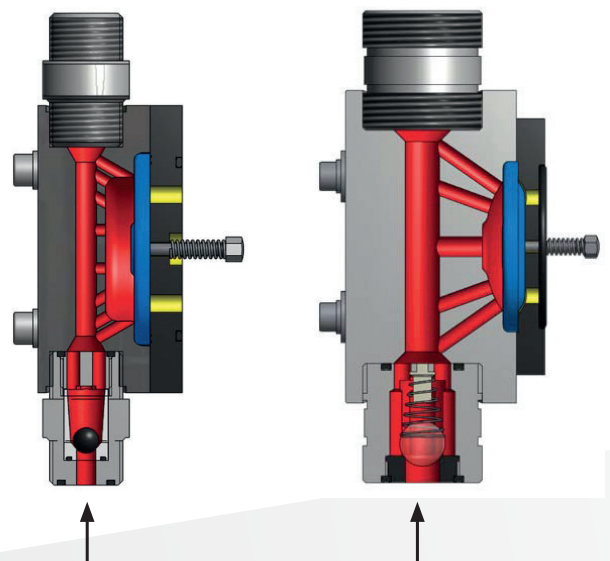
MEMDOS KMS-V	12-V	20-V	50-V	137-V	175-V	235-V	291-V	440-V	640-V	
400 V 3ph 50 Hz 0.18 kW	•	•	•							
460 V 3ph 60 Hz 0.21 kW	•	•	•							
400 V 3ph 50 Hz 0.55 kW				•	•					
460 V 3ph 60 Hz 0.65 kW					•					
400 V 3ph 50 Hz 1.1 kW						•	•	•	•	
460 V 3ph 60 Hz 1.3 kW						•	•	•	•	
Protection class	IP55									
Insulation class	F									

## Standard dosing head



Dosing head with standard suction and pressure valve:  
The material and type of the dosing head with suction and pressure valve has been adapted to the corresponding media and operating states.  
The materials PVC, PVDF and 1.4571 are available.

## Dosing head for viscous and abrasive media



Special versions with suction and pressure valve for abrasive media (left figure) and viscous media (right figure) available on request.

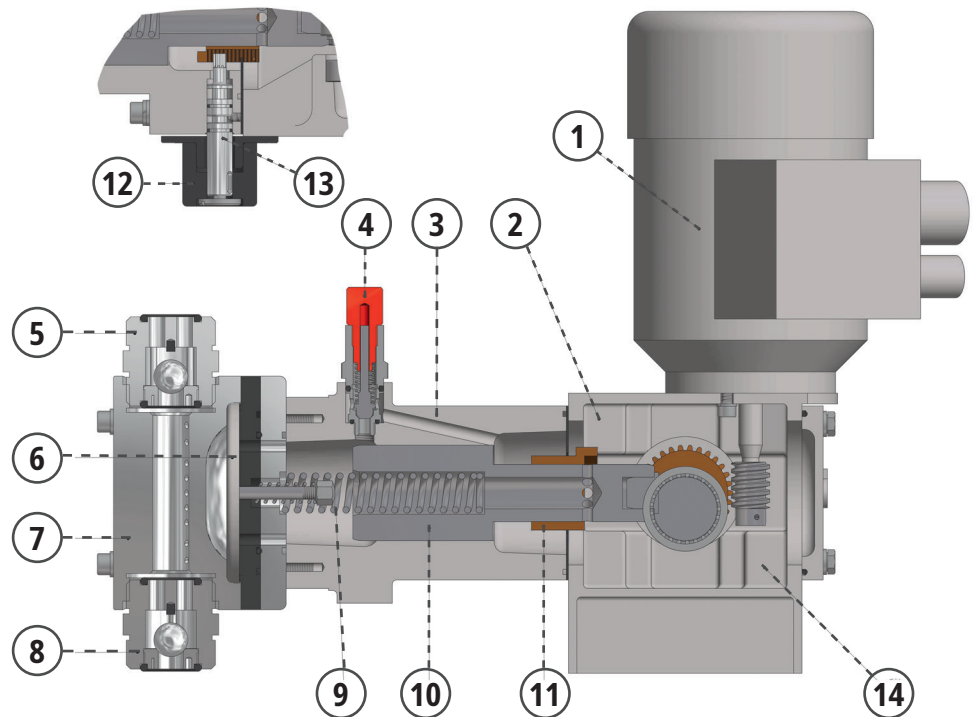


# A modular powerhouse

Motor piston diaphragm dosing pumps 6 – 1536 l/h, up to 25 bar

## Structure of the MEMDOS KMS

1. Drive motor
2. Drive unit
3. Hydraulic unit
4. Pressure-relief valve
5. Pressure valve
6. Diaphragms
7. Dosing head
8. Suction valve
9. Piston spring
10. Piston
11. Slide valve
12. Adjusting knob
13. Adjusting spindle
14. Hydraulic fluid



The MEMDOS KMS was developed in accordance with the modular principle. This offers the advantage that – depending on the problem – you can combine various pump elements and thus obtain a dosing pump that is optimally tailored to your needs.



# Technical data

MEMDOS KMS, KMS-HP			6	9-HP	12	24	24-HP	46	80	100	140	137
Delivery capacity at max. backpressure	50 Hz	l/h	6.3	9.2	12	24		46	80	100	140	137
	60 Hz	l/h	7.5	10.6	14	28.8		55.2	96	-	168	164
Delivery capacity at max. backpressure		ml/stroke	1.8	1.7		3.3		6.4	11	12	19	20
max. delivery pressure		bar	10	25	10		25	10	8			10
Max. stroke frequency	50 Hz	rpm	60	90	120					140	120	112
	60 Hz	rpm	72	108	144					-	144	134.4
Suction lift for non-gassing media		mWs	2									
Piston diameter		mm	14			20		27	37		45	32
Nominal valve width			DN8					DN20				
Weight	PVC	kg	11	-	11	-	11	15		31		
	PVDF	kg	11	-	11	-	11	15		31		
	Stainless steel (1.4571)	kg	12			13	12	18		40		
Approved ambient temperature		°C	-5 to +45									
Approved media temperature		°C	-5 to +45									
Dosing accuracy		%	1									

MEMDOS KMS, KMS-HP			272	350	490	582	582-HP	882	1058	1280	1536	
Delivery capacity at max. backpressure	50 Hz	l/h	272	350	490	582		882	1058	1280	1536	
	60 Hz	l/h	326	420	576	698		1058	-	1536	-	
Delivery capacity at max. backpressure		ml/stroke	41	52	73	87		131	126	190	183	
max. delivery pressure		bar	10		6	4	10			4		
Max. stroke frequency	50 Hz	rpm	112					140		112	140	
	60 Hz	rpm	134.4					-		134.4	-	
Suction lift for non-gassing media		mWs	2									
Piston diameter		mm	45	52	58	65		80		95		
Nominal valve width			DN20			DN32						
Weight	PVC	kg	33	40	42	60	85	90		100		
	PVDF	kg	33	40	42	60	85	90		100		
	Stainless steel (1.4571)	kg	42	45	47	65	90	100		120		
Approved ambient temperature		°C	-5 to +45									
Approved media temperature		°C	-5 to +45									
Dosing accuracy		%	1									

MEMDOS KMS-V			12-V	20-V	50-V	137-V	175-V	235-V	291-V	440-V	640-V	
Delivery capacity at max. backpressure	50 Hz	l/h	12	20	50	137	175	235	291	440	640	
	60 Hz	l/h	14	24	60	-	210	282	349	528	768	
Delivery capacity at max. backpressure		ml/stroke	6.7	11.1	18.5	40.8	52.1	69.9	86.6	131	190.5	
max. delivery pressure		bar	10	6		10					4	
Max. stroke frequency	50 Hz	rpm	30		45	56						
	60 Hz	rpm	36		54	-	67.2					
Suction lift for non-gassing media		mWs	2									
Piston diameter		mm	27	37	45		52	58	65	80	95	
Nominal valve width			DN20			DN32						
Weight	PVC	kg	13	15			68		74	80	100	
Approved ambient temperature		°C	-5 to +45									
Approved media temperature		°C	-5 to +45									
Dosing accuracy		%	1									

