

iSTEP STEPPER MOTOR PUMP



STEPPER MOTOR PUMP FOR DEMANDING METERING REQUIREMENTS

iSTEP - THE STEPPER MOTOR PUMP

The new iSTEP stepper motor pump by **sera** combines an intelligent drive concept with the accuracy of a diaphragm dosing pump and sets standards with regard to reproducibility and reliability. By means of the variable frequency control and a power range of 0.02..50 l/h at 10..3bar, the application possibilities are almost unlimited. It is intuitive to use, long lasting and is particularly suitable for demanding dosing tasks.

SCOPE OF APPLICATION

- Chlorine dosing for the treatment of drinking water
- Flocculating agent dosing in wastewater treatment
- Dosing of flocculant aids
- CIP Use

INPUTS & OUTPUTS

- 3 inputs programmable as
 - 3x digital inputs
 - 2x analogue inputs 0/4...20mA
- 2 digital outputs
- 1 analogue output for 0/4...20mA signal
- All inputs and outputs can be freely parameterised

OVERVIEW OF ADVANTAGES

- Extremely high performance range with only one pump
- Adjustment range 1:1000, thereby optimally adaptable
- Low-pulsation dosing
- Microprocessor-controlled drive
- Remote execution
- Energy-efficient drive technology (annual energy costs below 100 euro)
- Batch dispensing with recipe storage
- Intuitive menu guidance, including parameterisation
- Pulse transformation and reduction
- Weekday/timer functions with 10 storage spaces
- Low chemical consumption due to high dosing accuracy
- Slow mode operation for viscous media



ADDITIONAL FEATURES



EASY PARADOSING OF SEVERAL PUMPS BY MEANS OF REMOVABLE CONTROL ELEMENT

The iSTEP is operated via the detachable control element by means of keys and a click-wheel. It ensures the rapid commissioning of several pumps with the same function. The parameterisation of an iSTEP is saved in the control element. Subsequently, the control element can be connected to other pumps and the stored parameters can be transferred. Operation without a control element is also possible, since there is also an additional status LED as well as a start/stop button directly on the pump.

INTERFACE MODULE (OPTIONAL)

The control electronics of the iSTEP can be controlled by an interface module. This has one level input and two connections for PROFIBUS, by means of which the iSTEP can be integrated directly into a bus system. With PROFIBUS, the connection/disconnection occurs directly at the module. No additional distributors are required.



OPERATING CONDITION DISPLAY THROUGH COLOUR CHANGE

The status of the iSTEP (ready, active, warning, error message) is indicated by a colour change in the display and is thus instantly recognisable. Messages are displayed on the graphic display in plain text and in several languages. The pump comes equipped with a diaphragm monitoring system as standard. Service recommendations are also displayed, thus minimising downtimes.

ADDITIONAL FEATURES

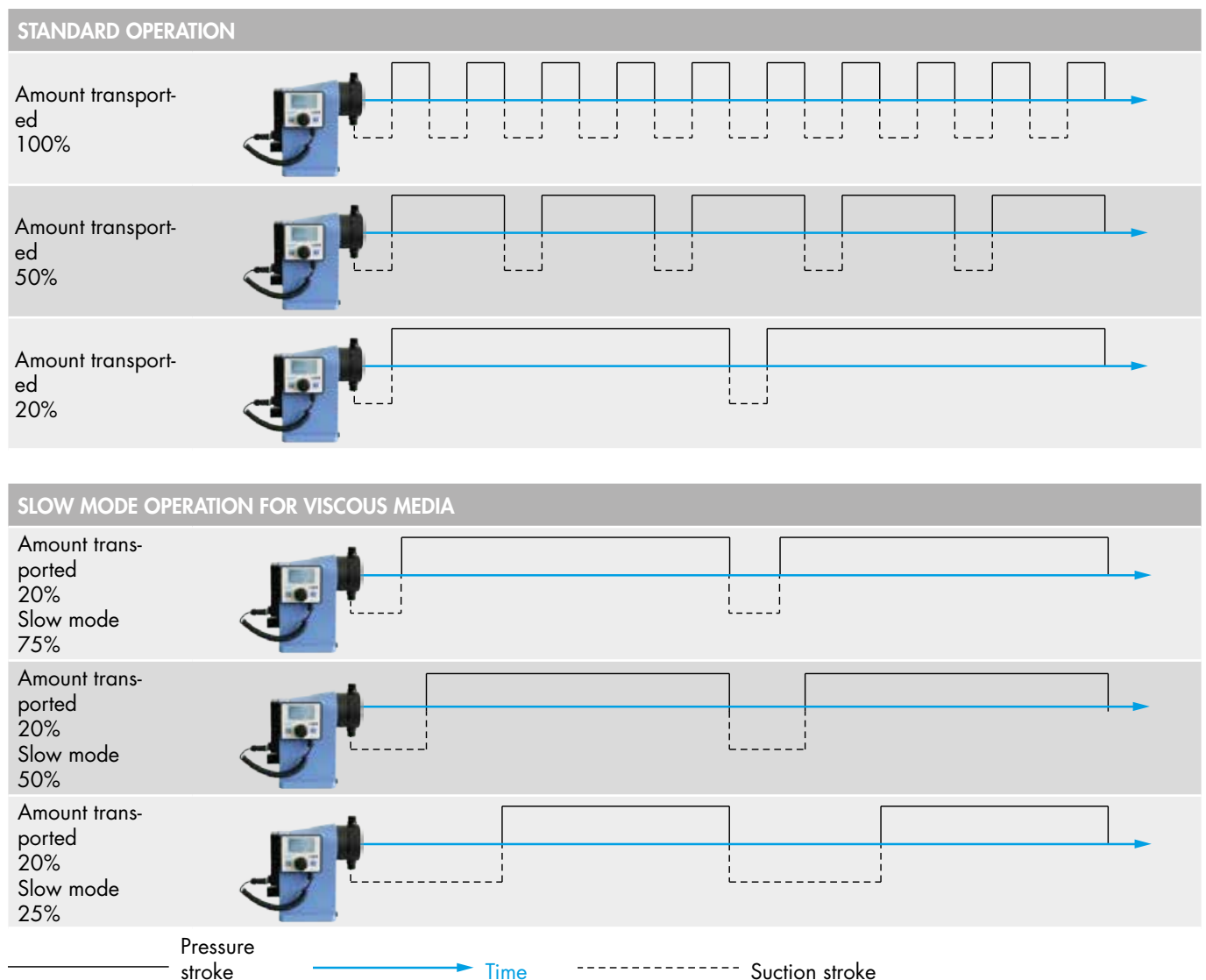
APPLICABLE INTERNATIONALLY

The CE and TR certifications are proof of the safe use of the iSTEP in all relevant markets. Individual power plugs (voltage range 100-240V) ensure smooth operation anywhere in the world, and the display is available with nine menu languages (de, en, es, fr, nl, cz, fi, tr, sv), enabling intuitive operation internationally.



STANDARD AND SLOW MODE OPERATION

The iSTEP allows different speeds of suction and pressure stroke depending on the desired flow amount and suction height. This results in a constant flow rate and, thereby, a gentle and low-pulsation dosing. When transporting viscous media, a slow mode function (in contrast to standard operation) enables a reduction of the maximum suction speed.



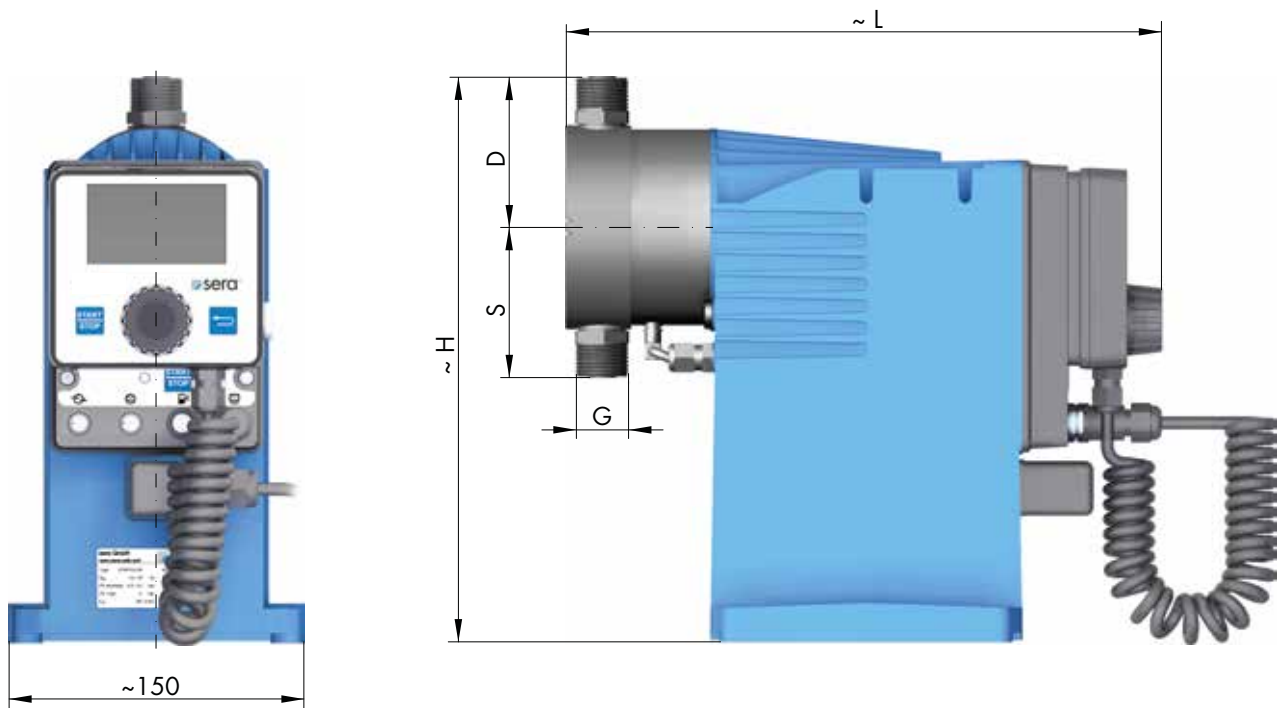
TECHNICAL DATA

PUMP DATA			iSTEP S 20	iSTEP S 30	iSTEP S 40	iSTEP S 50
Permissible pressure p _{2max.} at the pump outlet	bar		10	7	6	3
Nominal capacity Q _N at p ₂ max.	l/h	50/60 Hz	20	30	40	50
Capacity min. (1:1000)	l/h	50/60 Hz	0,02	0,03	0,04	0,05
Capacity min. (1:100)*	l/h	50/60 Hz	0,2	–	0,4	–
Quantity per stroke	ml/stroke	(100%)	1,75	3,33	3,51	4,39
Max. suction height	mWC		3	3	3	3
Min./max. permissible pressure at the pump inlet	bar	p _{1min/max}	-0,3/0,5	-0,3/0,5	-0,3/0,5	-0,3/0,5
Recommended nominal diameter DN of the connecting pipes	mm		5	5	5	8
Nominal stroke frequency	1/min	50/60 Hz	190	150	190	190
Weight approx	kg	plastic	6,1	6,1	6,1	6,3
		stainless steel	7	7	7	7,2

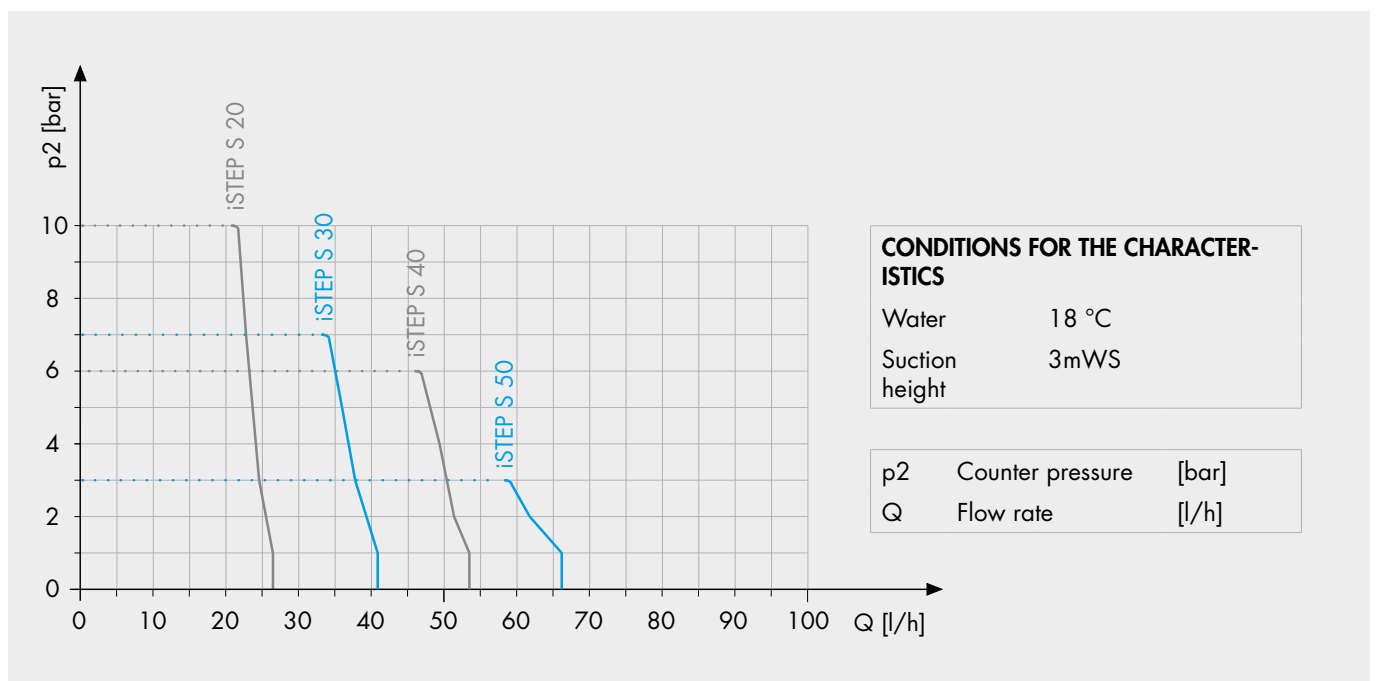
*for material 1.4435

ELECTRICAL DATA		iSTEP S...	
Power consumption	W	75	
Voltage	V	110 - 240 AC	
Frequency	Hz	50/60	
Rated current (50/60 Hz)	A	230 V	1,2
		115 V	2,0
Insulation class	ISO	F	
Recommended fuse	(circuit breaker)	C10A	
Enclosure		IP65	
Certifications		CE, TR	

MEASUREMENT



CHARACTERISTICS



MEASUREMENT TABLE

SUCTION VALVES		iSTEP S 20	iSTEP S 30	iSTEP S 40	iSTEP S 50
DN	Nominal weight	5	5	5	8
G	Connection thread	PVC, PP-/PVDF-FRP, 1.4571	G3/4	G3/4	G3/4
G	Connection thread	1.4435	Rd28x1/8"	–	Rd28x1/8"
S	Double valves	PVC	65	72	72
S	Double valves	PP-/PVDF-FRP	56,6	69,6	69,6
S	Double valves	1.4571	65	72	72
S	Double valves	1.4435	122,5	–	122,5
PRESSURE VALVES					
DN	Nominal weight	5	5	5	8
G	Connection thread	PVC, PP-/PVDF-FRP, 1.4571	G3/4	G3/4	G3/4
G	Connection thread	1.4435	Rd28x1/8"	–	Rd28x1/8"
D	Double valves	PVC	65	72	72
D	Double valves	PP-/PVDF-FRP	64,6	69,6	69,6
D	Double valves	1.4571	65	72	72
D	Double valves	1.4435	122,5	–	122,5
TOTAL HEIGHT					
H	PVC	275	282	282	285
H	PP-/PVDF-FRP	275	280	280	286
H	1.4571	275	282	282	286
H	1.4435	333	–	333	–
TOTAL LENGTH					
L	PVC	306	310	310	309
L	PP-/PVDF-FRP	303	303	303	303
L	1.4571	304	308	308	307
L	1.4435	330	–	330	–

(Dimensions in mm)

ACCESSORIES

The **sera** fittings and accessories range of the iSTEP:

- Accessories for the control connection
- Console for wall mounting
- Flow controller/flow meter
- Suction lance
- Foot valve
- Multi-functional container
- Membrane overflow/pressure-keeping valve
- Multi-functional valve
- Diaphragm pulsation dampener
- Vent valve
- Dosing tube
- Tube connection



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