Signal **S300 SERIES**

www.signal-pumps.co.uk

S300 L series
positive displacement metering pump

Operating capacities
from 1.5 to 22,000 litres/hour
from 400 to 5 bar

- A range of high temperature head materials includes special stainless steel option that can meter liquids at up to 300˚C.
- Suitable for high pressure applications which demand accuracy and reliability up to 400 bar.
- Multiple headed option available with different sized heads.
- Unique stroke adjustment system and smooth control of flow rate with pump either in use or stationary.
- High metering accuracy and design strength combine to provide a pump that is engineered for continuous 24 hour industrial operation.

Signal
METERING PUMPS

A division of GEE & Co

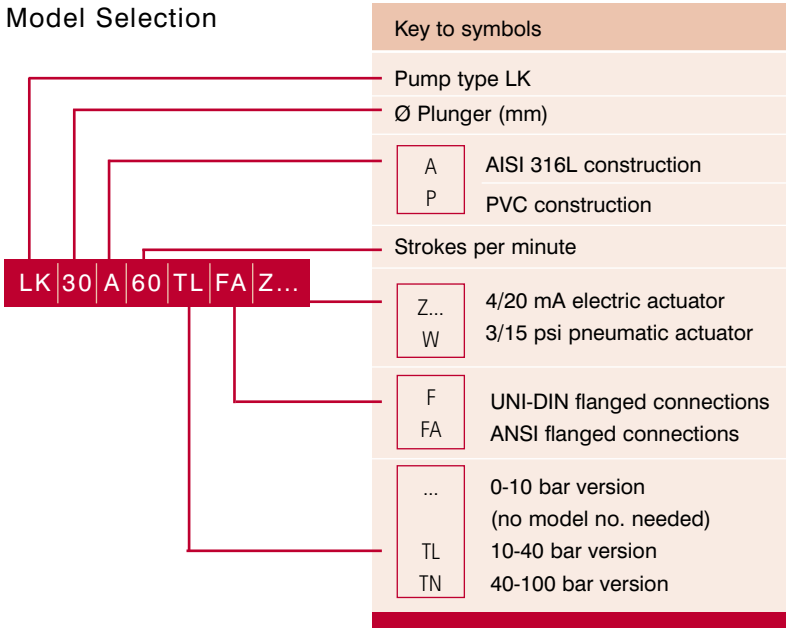
Signal METERING PUMPS

S300 SPECIFICATION AND PERFORMANCE

S300 L series positive displacement metering pump

Operating capacities from 1.5 to 5,500 litres/hour from 400 to 5 bar

Model Selection



Construction materials

The S300 L series pump casing is constructed of heavy duty cast iron for strength and operational durability at high back pressures. Choice of construction materials for pump heads are as follows:

L SERIES

	A	P	AC	ACV	H
Pump Head	AISI316L	PVC	AISI 316L	AISI 316L	AISI 316L
Plunger	AISI 316L	Ceramic	Ceramic	Ceramic	Ceramic
Packing	PTFE	PTFE	PTFE	Polyurethane	PTFE
Valve seat	AISI 316L	PVC •	AISI 316L	AISI 316L	Incoloy825
Valve	AISI 316L	Glass •	AISI 316L	AISI 316L	Carpenter20
Valve seal	Viton	Viton	Viton	Viton	Viton

• LY6-8-10P, ceramic valves and seats.

Motors

- Three phase 0.18-3.7 kW 230/400v 4 poles 50Hz IP55 I. CL.F-51 IEC 34-1
- Single phase 0.24-1.5kW 220/240v 4 poles 50Hz IP55 I. CL.F-51 IEC 34-1

Pumps

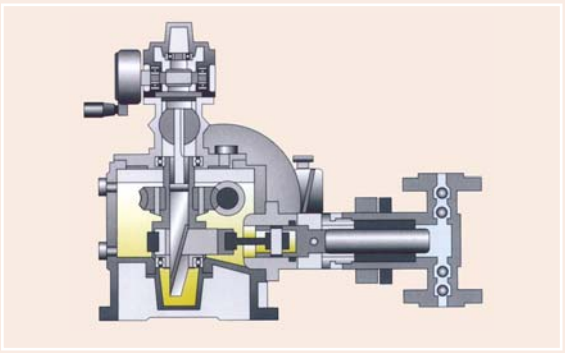
- API 675
- Double or single valve ball.
- Suction and discharge connections of LY series - threaded or flanged up to 130 litres/hour (flanged only for higher flow rates and larger units).
- Pump heads – stainless steel, PVC or PTFE (other materials available on request).
- Pre-set for multiple head configuration.
- Stroke: LY 11/17mm: LK 30mm: LN/LP 50mm.
- 5,500 l/hr per pump head (4 pump heads - max).
- Positive displacement mechanism with mechanical return of the plunger.
- All pump types available in TS version for high back pressure LY TS/LK TS/LN TS/LP TS - up to 400 bar.

Stroke adjustment

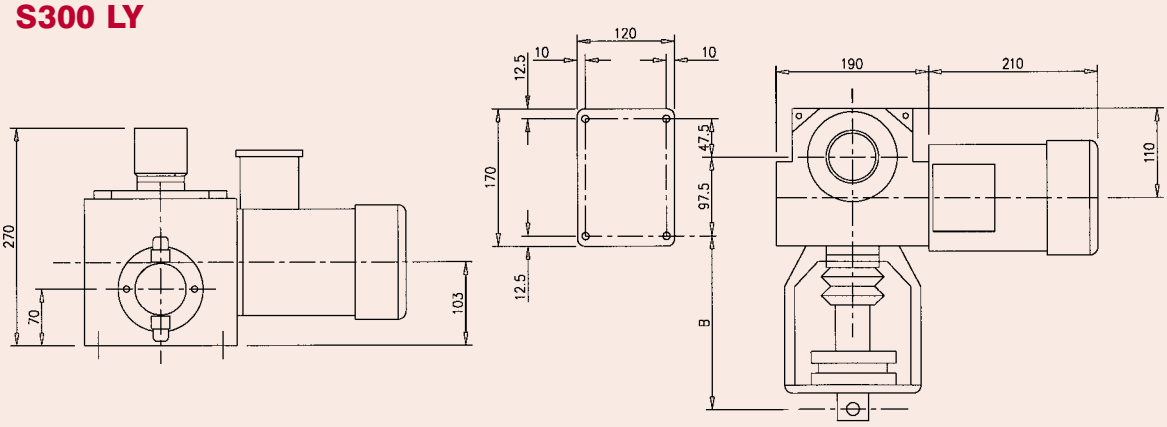
- Stroke control – 1% accuracy within 10% to 100% of the nominal flow rate.
- Standard manual adjustment via 0-10 scale micrometer knob.
- Optional 0-100% scale dial handwheel.
- Optional servo giving automatic remote adjustment of flow-rate (for details, see separate data sheet on S300 series electric servo controls).

EXTERNAL DIMENSIONS

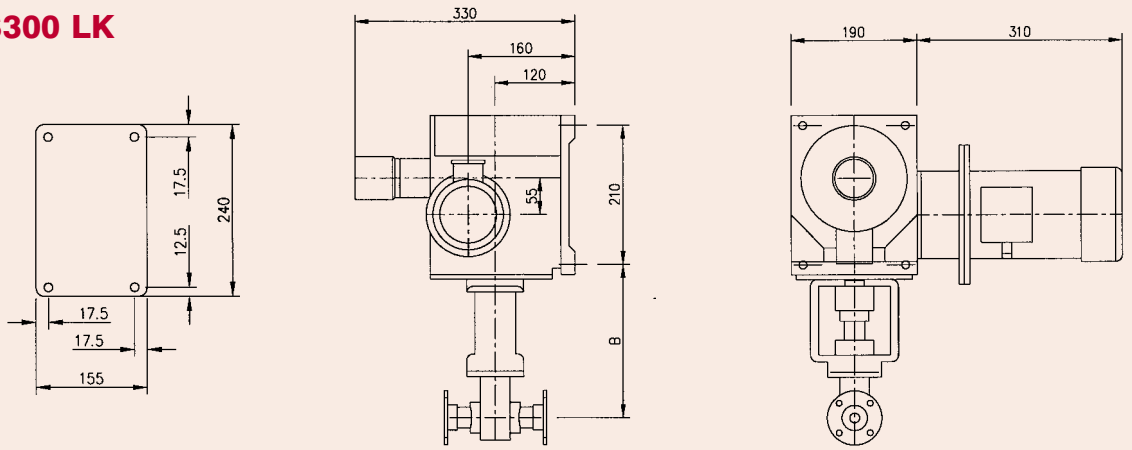
Pump shown with four different head sizes, single motor and pneumatic servo



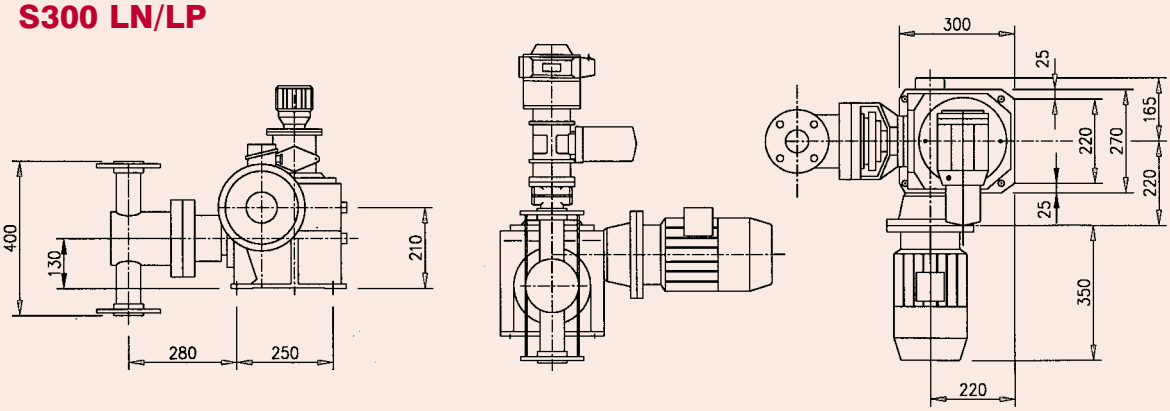
S300 LY



S300 LK



S300 LN/LP



Drawing dimensions may vary depending upon model/pump head. mm (unless stated).

TECHNICAL DATA

S300 SERIES LY 1-400L/H

Type	Flow Rate l/h	Strokes (spm)	Max. back pressure (bar)				Connections		
			0.18kW		0.37kW		Threaded	Flanged	
			AISI316L	PVC	AISI316L	PVC		UNI	ANSI
LY6	1.0	50	40	10	100	10	3/8" BSPF	15	½"
LY6	1.5	70	40	10	100	10		15	½"
LY6	2.0	100	40	10	100	10		15	½"
LY8	1.5	36	40	10	100	10	3/8" BSPF	15	½"
LY8	1.8	50	40	10	100	10		15	½"
LY8	2.5	70	40	10	100	10		15	½"
LY8	3.5	100	40	10	100	10		15	½"
LY10	3.5	50	40	10	100	10	3/8" BSPF	15	½"
LY10	4.5	70	40	10	100	10		15	½"
LY10	6.5	100	40	10	100	10		15	½"
LY15	8	50	40	10	100	10	3/8" BSPF	15	½"
LY15	11	70	40	10	100	10		15	½"
LY15	15	100	40	10	100	10		15	½"
LY20	14.5	50	23	10	70	10	3/8" BSPF	15	½"
LY20	20	70	23	10	60	10		15	½"
LY20	28	100	23	10	50	10		15	½"
LY25	23	50	15	10	40	10	3/8" BSPF	15	½"
LY25	32	70	15	10	40	10		15	½"
LY25	43	100	15	10	40	10		15	½"
LY30	32	50	-	-	40	10	3/8" BSPF	15	½"
LY30	45	70	-	-	40	10		15	½"
LY30	62	100	-	-	33	10		15	½"
LY30	75	118	-	-	30	10		15	½"
LY40	60	50	-	-	22	10	½" BSPF	15	½"
LY40	82	70	-	-	20	10		15	½"
LY40	110	100	-	-	18	10		15	½"
LY40	130	118	-	-	16	10		15	½"
LY50	90	50	-	-	14	10	-	20	¾"
LY50	130	70	-	-	13	10		20	¾"
LY50	175	100	-	-	11	10		20	¾"
LY50	210	118	-	-	10	10		20	¾"
LY65	155	50	-	-	10	7	-	20	¾"
LY65	220	70	-	-	9	7		20	¾"
LY65	300	100	-	-	7	7		20	¾"
LY75	210	50	-	-	5	-	-	25	1"
LY75	300	70	-	-	5	-		25	1"
LY75	400	100	-	-	5	-		25	1"

TECHNICAL DATA

S300 SERIES LK 6-1000L/H

Type	Flow Rate l/h	Strokes (spm)	Max. back pressure (bar)				Connections	
			AISI316L		PVC			
			0.37kW	0.75kW	0.37kW	0.75kW	DN	ANSI
LK10	6	60	80	100	-	-	15	½"
LK10	8	82	80	100	-	-	15	½"
LK10	10	102	80	100	-	-	15	½"
LK10	13	123	80	100	-	-	15	½"
LK15	15	60	80	100	10	10	15	½"
LK15	20	82	80	100	10	10	15	½"
LK15	25	102	80	100	10	10	15	½"
LK15	30	123	75	100	10	10	15	½"
LK20	30	60	80	100	10	10	15	½"
LK20	38	82	60	100	10	10	15	½"
LK20	48	102	55	90	10	10	15	½"
LK20	58	123	45	80	10	10	15	½"
LK25	47	60	60	90	10	10	15	½"
LK25	62	82	50	80	10	10	15	½"
LK25	78	102	35	70	10	10	15	½"
LK25	93	123	30	60	10	10	15	½"
LK30	70	60	40	70	10	10	20	¾"
LK30	90	82	32	70	10	10	20	¾"
LK30	110	102	25	52	10	10	20	¾"
LK30	135	123	20	43	10	10	20	¾"
LK40	128	60	20	40	10	10	20	¾"
LK40	165	82	18	40	10	10	20	¾"
LK40	210	102	15	30	10	10	20	¾"
LK40	250	123	12	25	10	10	20	¾"
LK50	200	60	15	27	10	10	25	1"
LK50	265	82	13	27	10	10	25	1"
LK50	330	102	9	18	9	10	25	1"
LK50	400	123	7	15	7	10	25	1"
LK65	340	60	-	16	7	10	25	1"
LK65	450	82	-	16	6	10	25	1"
LK65	550	102	-	12	4	10	25	1"
LK65	665	123	-	9	3	9	25	1"
LK80	510	60	-	10	-	10	40	AISI316: 1½" PVC: 2"
LK80	700	82	-	8.5	-	8.5	40	
LK80	850	102	-	7	-	7	40	
LK80	1000	123	-	6	-	6	40	
LK100	800	60	-	6	-	10	40	
LK100	1050	82	-	4.5	-	8.5	40	
LK100	1300	102	-	4	-	7	40	

TECHNICAL DATA

S300 SERIES LN 72-6500L/H

Type		Flow Rate l/h	Strokes (spm)	Max. Back pressure (bar)		Connections			
				AISI316L	PVC	UNI		ANSI	
				1.5kW	1.5kW	A	P	A	P
LN30		72	40	90	-	20	-	3/4”	-
LN30		90	47	90	-	20	-	3/4”	-
LN30		105	56	90	-	20	-	3/4”	-
LN30		125	68	90	-	20	-	3/4”	-
LN30		150	80	90	-	20	-	3/4”	-
LN40		230	68	50	-	20	-	3/4”	-
LN40		275	80	50	-	20	-	3/4”	-
LN40		340	96	40	-	20	-	3/4”	-
LN40		420	120	40	-	20	-	3/4”	-
LN50		380	68	30	-	25	25	1”	1”
LN50		445	80	30	-	25	25	1”	1”
LN50		540	96	26	-	25	25	1”	1”
LN50		650	120	20	-	25	25	1”	1”
LN65		650	68	20	10	40	40	1½”	2”
LN65		750	80	18	10	40	40	1½”	2”
LN65		900	96	16	10	40	40	1½”	2”
LN65		1100	120	12	10	40	40	1½”	2”
LN80		950	68	14	10	40	40	1½”	2”
LN80		1100	80	12	10	40	40	1½”	2”
LN80		1330	96	10	10	40	40	1½”	2”
LN80		1650	120	8	8	40	40	1½”	2”
LN100		1500	68	8	9	40	40	1½”	2”
LN100		1800	80	7	7	40	40	1½”	2”
LN100		2150	96	6	6	40	40	1½”	2”
LN100		2700	120	5	5	40	40	1½”	2”
LN120		2100	68	6	6	50	50	2”	2”
LN120		2500	80	5	5	50	50	2”	2”
LN120		3200	96	4	4	50	50	2”	2”
LN120		3800	120	3.5	3.5	50	50	2”	2”
Double - Acting	LN120ADE	3600	56	-	-	50		2”	
		4200	68	-	-	50		2”	
		4300	80	-	-	50		2”	
	LN135ADE	4600	56	-	-	65		2½”	
		5300	68	-	-	65		2½”	
		6300	80	-	-	65		2½”	

TECHNICAL DATA

S300 SERIES LP 230-11000L/H

Type		Flow Rate l/h	Strokes (spm)	Max. Back pressure (bar)				Connections			
				AISI316L		PVC		UNI		ANSI	
				3	4	3	4	A	P	A	P
LP40		230	68	80	90	-	-	20	-	¾”	-
LP40		275	82	80	90	-	-	20	-	¾”	-
LP40		340	97	70	80	-	-	20	-	¾”	-
LP40		420	120	65	80	-	-	20	-	¾”	-
LP50		380	68	55	65	-	-	25	25	1”	1”
LP50		445	82	50	60	-	-	25	25	1”	1”
LP50		540	97	45	55	-	-	25	25	1”	1”
LP50		650	120	40	45	-	-	25	25	1”	1”
LP65		650	68	36	40	-	-	40	40	1½”	2”
LP65		750	82	32	40	-	-	40	40	1½”	2”
LP65		900	97	28	35	-	-	40	40	1½”	2”
LP65		1100	120	22	27	-	-	40	40	1½”	2”
LP80		950	68	26	27	-	-	40	40	1½”	2”
LP80		1100	82	22	27	-	-	40	40	1½”	2”
LP80		1380	97	18	22	-	-	40	40	1½”	2”
LP80		1650	120	14	17	-	-	40	40	1½”	2”
LP100		1500	68	15	15	10	10	40	40	1½”	2”
LP100		1800	82	13	15	0	10	40	40	1½”	2”
LP100		2150	97	10	12	9	10	40	40	1½”	2”
LP100		2700	120	9	11	7	10	40	40	1½”	2”
LP120		2100	68	10	10	10	10	50	50	2”	2”
LP120		2500	82	9	10	9	10	50	50	2”	2”
LP120		3200	97	7	9	7	9	50	50	2”	2”
LP120		3800	120	6.5	8	6.5	8	50	50	2”	2”
LP158		3000	56	-	6	-	6	50	50	2”	2”
LP158		3700	68	-	6	-	6	50	50	2”	2”
LP158		4500	82	-	6	-	6	50	50	2”	2”
LP158		5500	97	-	5	-	5	50	50	2”	2
Double - Acting	LP120ADE	3400	56	10	-	-	-	50	50	2”	2”
		4200	68	9	-	-	-	50	50	2”	2”
		5100	82	8	-	-	-	50	50	2”	2”
		6000	97	7	-	-	-	50	50	2”	2”
		7500	120	5.5	-	-	-	50	50	2”	2”
	LP135ADE	4300	56	-	-	-	-	65	65	2½”	2½”
		5300	68	-	-	-	-	65	65	2½”	2½”
		6500	82	-	-	-	-	65	65	2½”	2½”
		7700	97	-	-	-	-	65	65	2½”	2½”
		9700	120	-	-	-	-	65	65	2½”	2½”
	LP160ADE	6100	56	-	-	-	-	65	65	2½”	2½”
		7600	68	-	-	-	-	65	65	2½”	2½”
		9200	82	-	-	-	-	65	65	2½”	2½”
		11000	97	-	-	-	-	65	65	2½”	2½”

TECHNICAL SUPPORT

The Signal team of fully qualified sales engineers are on hand to assist you in any aspect of metering pump technology. Whether you need advice on general application needs, metering, pump performance, health and safety, product selection, accessory choice, ongoing operation or maintenance issues, please call a member of our

Technical Team on 0121 326 1700

We are here to support you before your purchase – and right through the long service life of your Signal pumps.

S300 L Series Accessory Range

Optional equipment for enhancing the control and performance of the S300 L pump series.

Foot valve and strainer
Assists in maintaining the prime of the pump under suction lift conditions and prevents large solids from entering the pump.

Suction lance
Combining a foot valve and strainer, the suction lance is inserted into the suction vessel, where it ensures maximum draw-down. It allows low level switching to stop the pump and can provide low-level cut-out. A further option of low-level warning may be incorporated.

Injection fitting
This maintains back pressure on the pump, even when the pump is disconnected. It generally assists with the control of flow and also injects material into the centre of the flow. Additionally, it serves as an anti-syphon device and non-return valve.

Pressure loading valve
On systems operating below 1 bar, the pressure loading valve maintains back pressure on the pump and ensures that accurate flow control is sustained. It also serves as an anti-syphon device.

Pressure relief valve
A safety device that protects the pump and system from damage if over pressure occurs.

Multifunction valve
Combines the function of pressure loading and pressure relief valve into a single unit that saves in installation cost and provides anti-syphon protection and drain facility.

Flow switch
Provides a positive indication that the pump is operating and the fluid is flowing.

Electronic controller
A complete control system that provides a loop back to the pump to maintain the required chemical dose. It can make the system more efficient and more economical and it can also be integrated with redox. or pH control.

Pulsation damper
Fitted to the suction or discharge side of the pump, it reduces pressure surges on arduous applications such as long dosing lines.

Tubing
Available in a wide range of diameters and materials, including PVDF, PFA, PE, nylon-reinforced PVC and others on request.

Servo motor
Provides motorised control of stroke length, and hence, flow - usually from a 4-20mA signal, which allows for remote control of the pump. A scaling facility is available which allows a reduction of the maximum flow rate anywhere in the region of 60-100% of the pump rated capacity.

VSD motor
A three-phase motor suitable for operation from a variable frequency inverter supply.

Hazardous areas
Hazardous area motors available with ATEX certification.

Tank and pump sets
A stand-alone and single-sourced chemical delivery system that can be bonded if required and can incorporate stirrers. Pre-engineered and tested, they are delivered to site ready to install and are available in a range of tank capacities up to 4,500 litres, although larger sets can also be engineered.

Stroke Counter
For batching operations.

Signal METERING PUMPS

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