

# LOWARA E-SH SELF-PRIMING

stainless steel 316 centrifugal pumps



## Self-priming pumps

### Description

The e-SH serie from Lowara is normal priming, but thanks to a special technique developed by Van der Ende Group, it is possible to make this serie of pumps self-priming. The e-SH serie self-priming pumps can be used in industrial and horticultural applications. The hydraulic part of the pump is made of AISI 316 and the self-priming tubing is made of pvc (16 bar). The pump is standard available with a 3-phase motor.

- e-SHE = close-coupled by means of a bracket with impeller keyed directly to the motor shaft extension.
- e-SHS = with a bracket, adaptor and rigid coupling keyed to the standard motor shaft extension.
- e-SHF = with bracket, support, flexible coupling, and aligning and anchoring base.

### Applications

- o irrigation and sprinkling
- o pressure boosting
- o industrial washing

### Specifications

- o suitable for clean liquids and continuously operating
- o construction: AISI 316 and pvc
- o capacity: up to 180 m<sup>3</sup>/h
- o head: up to 67 m
- o max. pressure: 10 bar
- o liquid temperature: -10 °C up to + 40 °C
- o asynchronous motor IE3
- o insulation class: F
- o protection: IP55
- o suction stub (pvc): NW75 – NW125
- o delivery stub (pvc): NW63 – NW110
- o power (P2): up to 22,0 kW
- o voltages:
  - 1-phase 220-240 Volt 50 Hz (up to 2,2 kW)
  - 3-phase 220-240/380-415 Volt 50 Hz (up to 3,0 kW)
  - 3-phase 380-415/660-690 Volt 50 Hz
- o automatic or manual bypass
- o UL/CSA certification available on request



## Hydraulic performance e-SHE, e-SHS, e-SHF series at 50 Hz, 2-pole

PUMP TYPE	RATED POWER		Q=CAPACITY																					
			l/min	100	150	200	250	300	400	500	600	700	800	1000	1200	1400	1600	1800	2000	2500	3000	3500	3800	
	m <sup>3</sup> /h	6	9	12	15	18	24	30	36	42	48	60	72	84	96	108	120	150	180	210	228			
kW		pk	H = TOTAL HEAD IN METRES COLUMN OF WATER																					
32-125/11	1,1	1,5		19,9	17,8	15,9	13,8	12,1	7,3															
32-160/15	1,5	2		21,7	20,4	18,8	17	15,8	9,5															
32-160/22	2,2	3		26,3	25,7	23,9	22,1	20,3	16,2															
32-200/30	3	4		36,6	35,5	33,6	30,9	28,6	25															
32-200/40	4	5,5		45,9	44,9	43	39,4	36,5	32,4															
32-250/55	5,5	7,5		47,4	45,4	43,8	42,2	38,5	32,2															
32-250/75	7,5	10		62,2	59,5	57,7	56,2	52,1	47,3															
40-125/11*	1,1	1,5					11,5	10,7	8,1	5,9														
40-125/15	1,5	2					15,6	14,1	12,1	10,1														
40-125/22	2,2	3					20,5	20	19	16,2	13,8	11,2												
40-160/30	3	4					34,5	26,4	23,5	19,3	15,3	10,5												
40-160/40	4	5,5					33,4	32,5	30,3	27,5	24	18,4												
40-200/55	5,5	7,5					45	43,8	40	37	31	25												
40-200/75	7,5	10					55	53,9	52	47	43	36												
40-250/92	9,2	15					57	56	53	49	45	39,5												
40-250/110	11	15					66,9	64,7	61	58	53,9	49												
50-125/22*	2,2	3								12,3	11,4	10,3	9,3	7										
50-125/30	3	4								16,5	14,8	13,6	12,5	9,3										
50-125/40	4	5,5								20,7	18,9	17,7	16,4	12,7										
50-160/55	5,5	7,5								28,3	28,5	26,5	24,9	20,3	15,7	10,3								
50-160/75	7,5	10								36,1	35	33	30	26,9	21,1	14								
50-200/92	9,2	15								46	44	42,9	40	32,8	24,4	13,3								
50-200/110	11	15								52	49	47,3	45,3	39,8	28,2	18,1								
65-160/40	4	5,5											10,8	8,8	6,9	5,1								
65-160/55**	5,5	7,5											14,7	13,8	11,5	9,6	7,5							
65-160/75	7,5	10											18	16,4	14,8	13,2	10,5							
65-160/92	9,2	15											27,7	26,2	23,6	19,9	15							
65-160/110	11	15											32,3	29,9	27,5	24,9	17,5							
65-200/150**	15	20											42	39,5	36	32,2	23,6	17,2						
65-200/185	18,5	25											49,9	46,3	43,7	39,4	34,3	23,5						
80-160/110*	11	15													23	21	17,5	12						
80-160/150	15	20													28,5	27,5	25	18	13					
80-160/185	18,5	25													35	32,4	32	26,9	18,7					
80-200/220	22	30													41,5	40	38	34,1	29,9					

\* Model not available in 60 Hz

\*\* Does not retrieve the last value on the curve (based on the available date)

Hydraulic performance e-SHE, e-SHS, e-SHF series at 60 Hz, 2-pole on the next page ►



## Hydraulic performance e-SHE, e-SHS, e-SHF Series at 60 Hz, 2-pole

PUMP TYPE	RATED POWER		Q=CAPACITY																																			
			l/min	100	150	200	250	300	400	500	600	700	800	1000	1200	1400	1600	1800	2000	2500	3000	3500	3800															
	kw	pk	m³/h	6	9	12	15	18	24	30	36	42	48	60	72	84	96	108	120	150	180	210	228															
H = TOTAL HEAD IN METRES COLUMN OF WATER																																						
32-125/11	1,1	1,5		19,2	17,2	15,3	13,4	11,7	7,2																													
32-160/15	1,5	2		22,9	21,4	19,4	17,5	15,9	9,4																													
32-160/22	2,2	3		27,8	27	24,8	22,8	20,6	15,7																													
32-200/30	3	4		38,5	37	34,6	31,3	28,4	23,5																													
32-200/40	4	5,5		46,2	45,8	43,9	40,2	37,2	33																													
32-250/55	5,5	7,5		51,2	49	47,1	44,9	40,6	33,1																													
32-250/75	7,5	10		64,6	61,6	59,6	57,7	53,3	48,3																													
40-125/11*	1,1	1,5																																				
40-125/15	1,5	2					15,3	13,7	11,6	9,5																												
40-125/22	2,2	3					20,6	20	18,6	15,6	13	10,5																										
40-160/30	3	4					28,9	27	23,9	19,8	15,8	10,6																										
40-160/40	4	5,5					33	31,8	29,3	26,5	23	17,5																										
40-200/55	5,5	7,5					41,4	40,5	36,7	33,6	27,7	21,7																										
40-200/75	7,5	10					55,8	54,5	52,5	47,4	43	35,4																										
40-250/92	9,2	15					56,5	55,2	51,9	47,4	42,5	36,3																										
40-250/110	11	15					65,8	63,6	59,4	55,7	50,6	44,5																										
50-125/22*	2,2	3																																				
50-125/30	3	4								16,8	14,9	13,5	12,3	9,2																								
50-125/40	4	5,5								22	19,7	18,3	16,9	13																								
50-160/55	5,5	7,5								27,2	27,4	25,4	24	19,7	15	9,2																						
50-160/75	7,5	10								36,4	35,3	33,4	30,4	27,4	21,6	14,7																						
50-200/92	9,2	15								45,6	43,8	43,1	40,5	33,8	24,8	-																						
50-200/110	11	15								47,6	45	43,5	41,8	36,8	25,6	-																						
65-160/40	4	5,5																																				
65-160/55**	5,5	7,5												16,2	15,3	13	11	-																				
65-160/75	7,5	10												19,3	17,9	16,4	14,8	12																				
65-160/92	9,2	15												28,7	27,3	24,9	21,6	17,1																				
65-160/110	11	15												32,9	30,8	28,8	26,6	19																				
65-200/150**	15	20												42,9	40,1	36,3	32,3	23,4	-																			
65-200/185	18,5	25												51,5	47,5	44,5	39,7	34,1	22,8																			
80-160/110*	11	15																																				
80-160/150	15	20															26,7	25,7	23,2	16,5	11,5																	
80-160/185	18,5	25															33	30,4	29,9	24,6	16,6																	
80-200/220	22	30															40,9	39,4	37,4	33,3	28,9																	

\* Model not available in 60 Hz

\*\* Does not retrieve the last value on the curve (based on the available date)

### e-SHE pumps in self-priming version

In some cases, it is necessary to make use of a self-priming pump. The e-SHE serie from Lowara is normal priming, but thanks to a special technique developed by Van der Ende Group, it is possible to make this serie of pumps self-priming. We have been doing this for almost 20 years. Thanks to this customisation, it is now possible to continue deploying system pumps from the e-SHE serie, which are used for their large capacity and lifts.

The technique used has been carefully reviewed and modified. Now a valve is used which shuts off the bypass once the pump is pumping water.

This makes a difference to the loss of pressure and capacity or, in other words, the yield.

The suction opening is constructed with a 45° Y-piece so that the suction pipe can be installed above the pump house at an angle of 45°, so that a water seal is created.

### The valve

Is available in both a manual and an automatic version. In the automatic version, the bypass is closed once the water has been sucked up and the pressure built up.



The advantage of this version is that when the pump sucks up air and/or the pressure drops below a specific level, the self-priming action once again comes into action when the valve reopens the bypass. A manual valve can, after purchase, be easily converted to an automatic by use of a conversion kit.

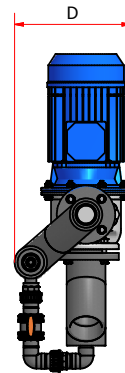
A patent has been granted to the system with the valves, manual, hydraulic or electrical. Once the pump has been made self-priming, the compression and suction connection is suitable for the use of pvc piping.

## The capacity and pressure

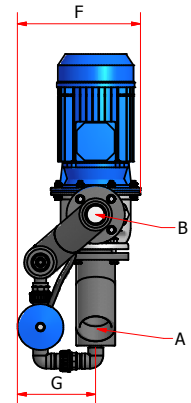
All pumps are measured in our workshop. The results of these measurements are used in this folder.

The dimensions of the pump with connected bypass are stated in this folder. The other dimensions and also the motor capacity and the NPSH, are in the original documents of the factory.

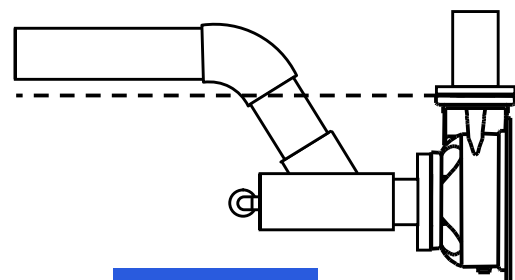
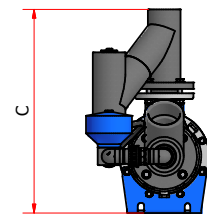
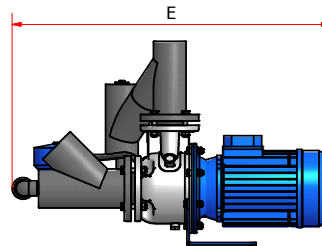
DIMENSION LOWARA SELF-PRIMING PUMPS (MM)							
PUMP TYPE	A	B	C	D	E	F	G
e-SHE 32-125/11	75	63	475	300	775	320	190
e-SHE 32-160/15	75	63	515	320	765	340	190
e-SHE 32-160/22	75	63	515	320	765	340	190
e-SHE 32-200/30	75	63	560	330	805	350	190
e-SHE 32-200/40	75	63	560	330	825	350	190
e-SHE 32-250/55	75	63	630	360	885	380	190
e-SHE 32-250/75	75	63	630	360	900	380	190
e-SHE 40-125/11	90	75	500	315	815	335	200
e-SHE 40-125/15	90	75	500	315	815	335	200
e-SHE 40-125/22	90	75	500	315	815	335	200
e-SHE 40-160/30	90	75	540	325	845	345	200
e-SHE 40-160/40	90	75	540	325	870	345	200
e-SHE 40-200/55	90	75	590	340	925	360	200
e-SHE 40-250/75	90	75	590	340	925	360	200
e-SHE 40-250/92	90	75	655	365	980	385	200
e-SHE 40-250/110	90	75	655	365	975	385	200
e-SHE 50-125/22	90	75	545	320	852	340	200
e-SHE 50-125/30	90	75	545	320	852	340	200
e-SHE 50-125/40	90	75	545	320	880	340	200
e-SHE 50-160/55	90	75	590	320	920	340	200
e-SHE 50-160/75	90	75	590	320	920	340	200
e-SHE 50-200/92	90	75	610	350	980	370	200
e-SHE 50-200/110	90	75	610	350	980	370	200
e-SHE 65-160/40	110	90	650	360	935	370	200
e-SHE 65-160/55	110	90	650	360	1020	370	220
e-SHE 65-160/75	110	90	650	360	1020	370	200
e-SHE 65-160/92	110	90	650	360	935	370	200
e-SHE 65-160/110	110	90	650	360	935	370	200
e-SHE 65-200/150	110	90	670	360	1110	370	200
e-SHE 65-200/185	110	90	670	360	1110	370	200
e-SHE 80-160/110	125	110	750	390	1100	390	220
e-SHE 80-160/150	125	110	770	390	1190	390	220
e-SHE 80-160/185	125	110	750	390	1190	390	220
e-SHE 80-200/220	125	110	750	390	1225	390	220



Version with manual valve



Version with automatic valve

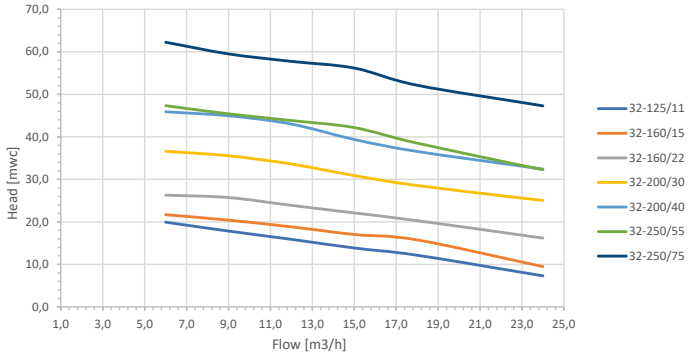


WATERSEAL

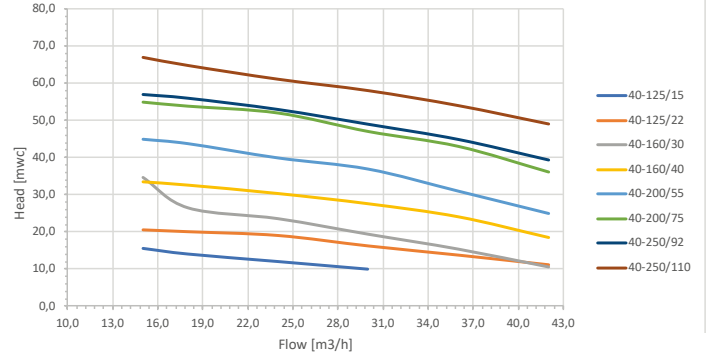


## Graphics by e-SHE, e-SHS, e-SHF Series at 50 Hz, 2-pole

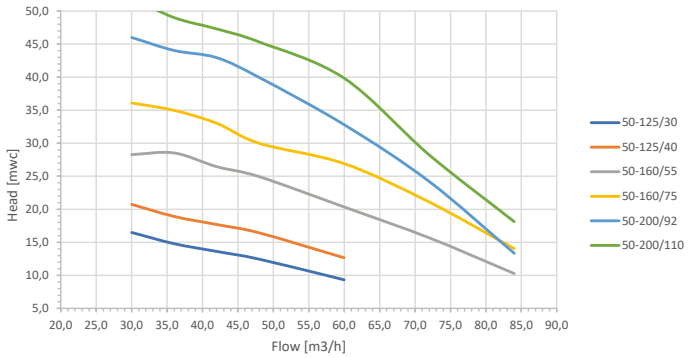
SHE 32 self-priming pump



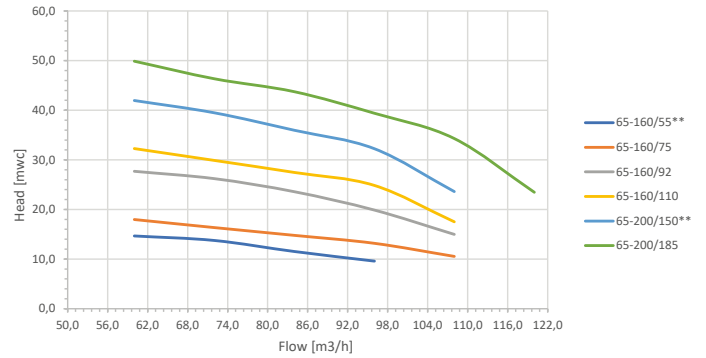
SHE 40 self-priming pump



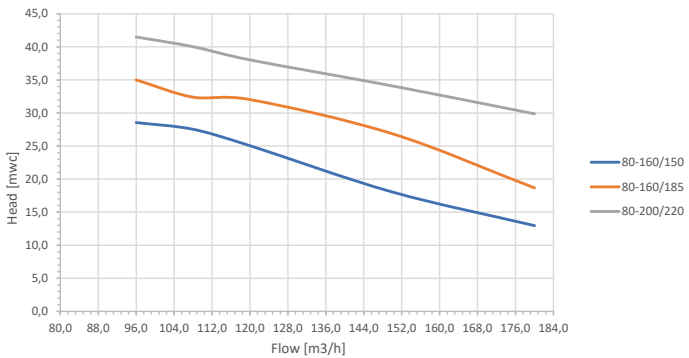
SHE 50 self-priming pump



SHE 65 self-priming pump



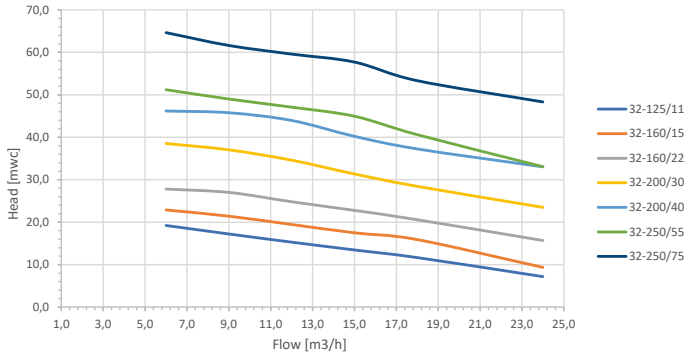
SHE 85 self-priming pump



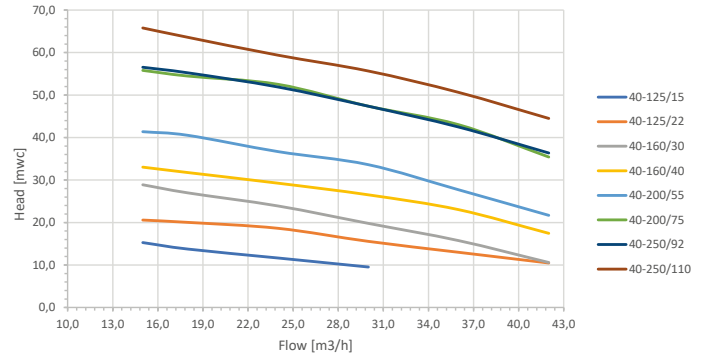


## Graphics by e-SHE, e-SHS, e-SHF Series at 60 Hz, 2-pole

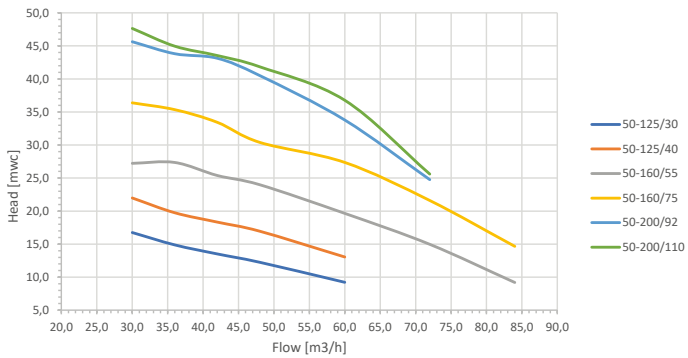
SHE 32 self-priming pump



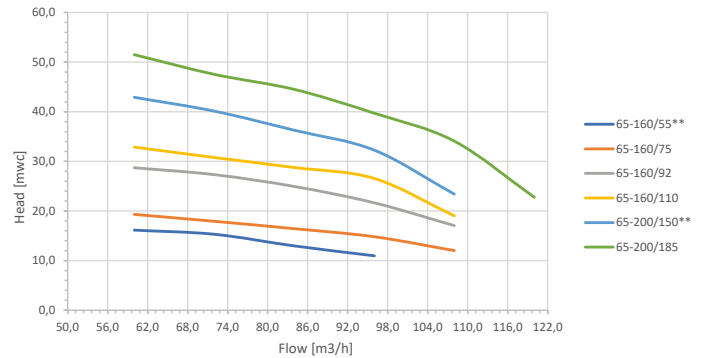
SHE 40 self-priming pump



SHE 50 self-priming pump



SHE 65 self-priming pump



SHE 85 self-priming pump

