



### SVH Series

*Multi-stage vertical centrifugal electric pumps fitted with Hydrovar<sup>®</sup>, a microprocessor-based control unit designed to manage pump performance according to system conditions and demand. The basic SV pump is thus transformed into a complete pumping system suitable for a number of applications.*

*Many construction versions are available, with models featuring 2-4-8-16-33-46-66-92 m<sup>3</sup>/h nominal capacities.*

#### SPECIFICATIONS

- Delivery:** up to 120 m<sup>3</sup>/h
- Head:** up to 330 m
- Power supply:** three-phase and single-phase 50 and 60 Hz
- Power:** 0.25 kW to 45 kW
- Maximum operating pressure:** 16, 25 or 40 bar (depending on the model and configuration)
- Temperature of pumped liquid:** 0°C to +80°C

#### HYDROVAR SPECIFICATIONS

- Power input:**  
1 x 220-240 Vac ± 15%  
3 x 380-460 Vac ± 15%
- Motor output voltage:**  
3 x 220-240 VAC (Input voltage)  
3 x 380-160 VAC (Input voltage)
- Power output:** 1.1-45 kW (up to 22 kW assembled on motor)
- Power:** 0.25 kW to 45 kW
- Protection:** IP55
- Ambient temperature:** 0°C to +50°C

#### MATERIALS

- Pump:** Stainless steel

#### APPLICATIONS

- Water distribution, irrigation
- Heating, ventilation
- Pressure boosting, cooling and chilling
- Industrial washing equipment, general industry
- Water treatment
- Filtration systems
- Auxiliary equipment

Available on request:  
 – version with efficiency level 1 motor  
 – version with 4-pole motor  
 The following pages show data concerning models SV2-4-8-16.



For a complete list of technical information, consult [www.lowara.com](http://www.lowara.com)

*Engineered for life*



## General Catalogue

### OPERATING PRINCIPLE

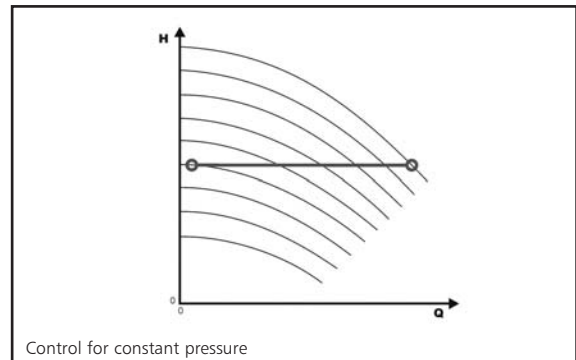
The main function of the HYDROVAR® device is to control the pump to meet system demands.

**HYDROVAR® performs these functions by:**

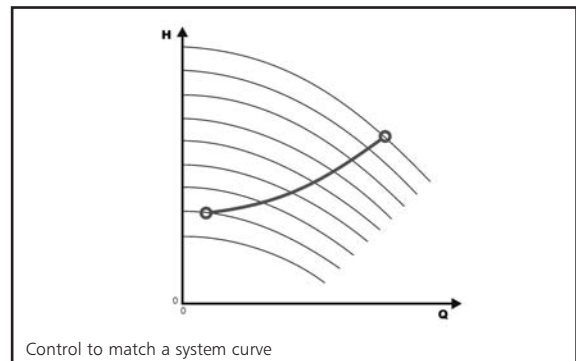
- 1) Measuring the system pressure or flow via a transmitter mounted on the pump's delivery side.
- 2) Calculating the motor speed to maintain the correct flow or pressure.
- 3) Sending out a signal to the pump to start the motor, increase speed, decrease speed or stop.
- 4) In the case of multiple pump installations, HYDROVAR® will automatically provide for the cyclic changeover of the pumps' starting sequence.

In addition to these basic functions, HYDROVAR® can do things that are normally only performed by the most advanced computerised control systems, such as:

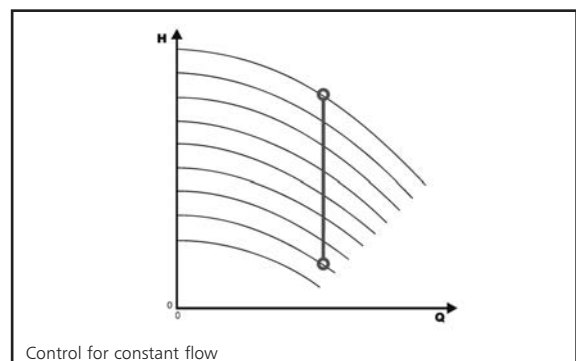
- Stop the pump or pumps at zero demand.
- Stop the pump or pumps in case of water failure on the suction side (protection against dry running).
- Stop the pump if the required delivery exceeds the pump's capacity (protection against cavitation caused by excessive demand), or automatically switch on the next pump in a multiple series.
- Protect the pump and motor from overvoltage, undervoltage, overload and earth fault.
- Vary the pump speed acceleration and deceleration time.
- Automatic pressure drop compensation caused by the increase in delivery.
- Conduct automatic test starts at set intervals.
- Monitor the converter and motor operating hours.
- Display all functions on an LCD in different languages (Italian, English, French, German, Spanish, Portuguese, Dutch).
- Send a signal to a remote control system which is proportional to the pressure and frequency.
- Communicate with another HYDROVAR or control system via an RS 485 interface.



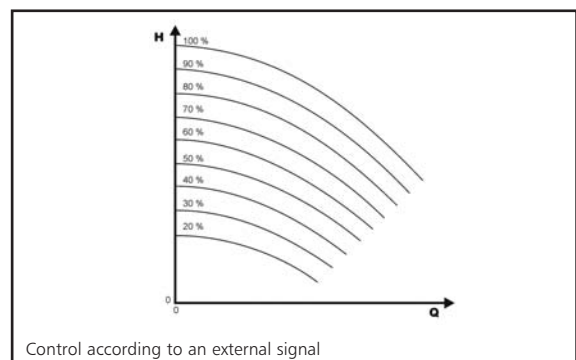
Control for constant pressure



Control to match a system curve



Control for constant flow



Control according to an external signal



## General Catalogue

### SHV SERIES HYDRAULIC PERFORMANCE TABLE AT 50 Hz

SVH	RATED POWER  kW	Q = DELIVERY																	
		l/min 0	20	30	40	50	60	70	100	120	133	150	167	200	233	267	300	350	400
		m <sup>3</sup> /h 0	1,2	1,8	2,4	3	3,6	4,2	6	7,2	8	9	10	12	14	16	18	21	24
H = TOTAL HEAD IN COLUMN OF WATER (METRES)																			
SV205F07T	1 x 0.75	53,5	47	42,5	38	32	26	18											
SV206F07T	1 x 0.75	64	56	51	45,5	38,5	31	22											
SV207F11T	1 x 1.1	75	65,5	60	53	45	36,5	26											
SV208F11T	1 x 1.1	85,5	75	68	61	51,5	41,5	30											
SV209F11T	1 x 1.1	96	84	76,5	68,5	58	46,5	32,5											
SV211F15T	1 x 1.5	117	103	94	84	71	57	41											
SV212F15T	1 x 1.5	128	112	102	91	77	62	44											
SV214F22T	1 x 2.2	150	131	119	106	90	73	52											
SV404F07T	1 x 0.75	40			34	32	30,5	29	21	15	10								
SV405F11T	1 x 1.1	50			42,5	40	38	36,5	26	18,5	12,5								
SV406F11T	1 x 1.1	60			51	48	45,5	44	31,5	22	16								
SV407F11T	1 x 1.1	70			59,5	56	53	51	37	26	18								
SV408F15T	1 x 1.5	80			68	65	61	58,5	42	29,5	21								
SV409F15T	1 x 1.5	90			76,5	73	68,5	65,5	47	33,5	23								
SV411F22T	1 x 2.2	111			93,5	89	83,5	80,5	58	41	29								
SV413F22T	1 x 2.2	131			111	105	99	95	68	48	34								
SV414F30T	1 x 3	141			119	113	106	102	73,5	52	36								
SV802F11T	1 x 1.1	27							24,8	24	23	22	20,5	17,2	13,2				
SV803F15T	1 x 1.5	41							37	36	34,5	33	30,5	25,8	20				
SV804F22T	1 x 2.2	55							50	47,5	46	44	41	34,5	26,5				
SV805F22T	1 x 2.2	68							62	60	57,5	55	51	43	33				
SV806F30T	1 x 3	82							74,5	71	69	66	61,5	52	40				
SV808F40T	1 x 4	110							99	95	92	87,5	81,5	69	53				
SV809F40T	1 x 4	123							112	107	104	97,5	92	78	60				
SV811F55T	1 x 5.5	150							137	130	127	119	112	95	73				
SV1602F22T	1 x 2.2	35										32,5	32	31	29,5	27,5	25	20	14,3
SV1603F30T	1 x 3	52										49	48	46	44	41	37,5	30,2	21,5
SV1604F40T	1 x 4	69										65	64	62	59	54,5	50	40,3	28,6
SV1605F55T	1 x 5.5	86										81	80	77	73	68,5	62	50	35,8
SV1606F55T	1 x 5.5	104										98	96	92	88	82	75	60,5	43
SV1607F75T	1 x 7.5	121										114	112	108	103	96	87	70,5	50
SV1608F75T	1 x 7.5	138										130	128	123	117	109	100	81	57

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