

# Electro Vacuum Pump Units

The economical all-rounder



# The Economical All-Rounder

## The HÜDIG Electro Vacuum Pump Units

... convince with experienced engineering and thousandfold approved all over the world. The units are designed in full detail to a modular system. The construction industry requires high standards of reliability and efficiency combined with the minimum amount of maintenance. The result of these requirements is our product-line HC 467 respectively HC 468 as well as HC 487 respectively HC 488.

### Galvanized Vacuum Chamber

The HÜDIG vacuum chambers are always hot galvanized and therefore provide the maximum corrosion protection. The large volume of the chamber allows a minimum operating frequency of the water- and vacuum pumps. This results in a higher efficiency and longer service life of the complete unit.

### Reliable Water-Pumps

If a filter-casing is broken or the method of open dewatering is practiced, it will never be a problem for the HÜDIG Electro Vacuum Pump Unit. By the use of GRINDEX waste water submersible pumps a default caused by the conveyance of sandy water is ruled out. An absolute advantage!

Conveying salty- or brackish water usually limits the lifetime of pumps. For this application we suggest using GRINDEX slurry submersible pumps (ph-value 3 – 9).



## Strong components of HÜDIG GmbH & Co. KG



Vacuum Chamber



Vacuum Generator



Vacuum Pump



Besides the resistance to chemically polluted water they fulfil the requirements of waste water submersible pumps, too. Special information material is available for this requirement..

### Powerful Vacuum Pumps

The HÜDIG Electro Vacuum Pump Units from the product range HC 467/.. and HC 487/.. are equipped with rotary vacuum pumps with a rotational lubrication system. They feature a large air capacity even at high vacuum. These pumps are robust and operate in frost, as well as in

tropical temperatures faultlessly. Damage caused by frost or lack of cooling water is not possible. Even the daily task of monitoring the operating water is not required with oil-lubricated pumps.

### The Vacuum Generator as a Dry-Run

If a vacuum generator without oil- or water-lubrication is required, the dry-running HÜDIG Vacuum Generator is the right solution. The HC 468/.. and HC 488/.. product range is equipped with so-called dry-running vacuum pumps.



*Stackable sound protection hood*



*Secure, expert loading of your goods*

# HÜDIG – Always Energy-Conscious



HÜDIG – for decades a leading manufacturer of ground water control units has been setting benchmarks in engineering. In addition to the goal of manufacturing robust and reliable units, developing units that save operating power was a focus of our engineering. HÜDIG was the first supplier in the world who used an electronic level switch as early as in the 70s of the last century. Following this philosophy we were the first supplier to offer our customers the possibility of using a frequency-controlled vacuum generator on their electro vacuum pump units.

## Advantages for the operator:

### 1. Reduced Current Consumption

The consumption of the current is reduced (according to the operational ratio of the airpump to the water pump a reduction of 10 to 40 kWh/d is realistic).

### 2. Reduced Runtime – Increased Service Life

The running time of the water pump and the vacuum generator is reduced. Additionally the rpm of the vacuum generator is reduced. All together this leads to an increase of the service life.

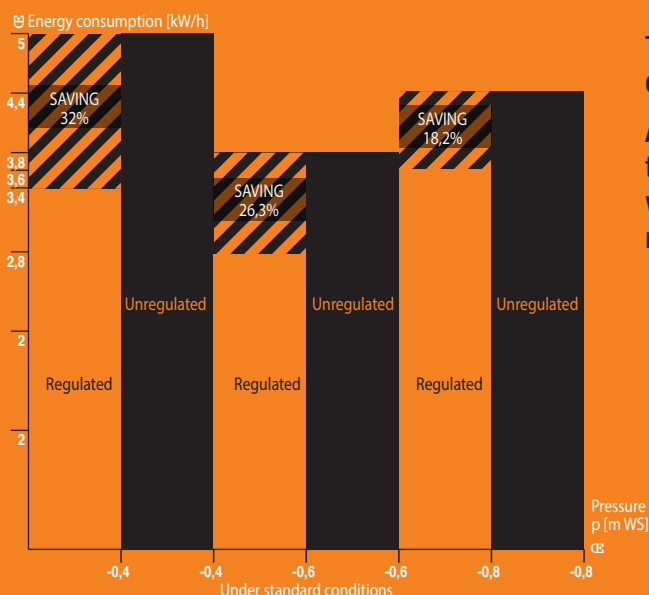
### 3. Increased Air Volume Flow – Better Performance

Through the use of frequency-controlled electro motors the speed can be increased to 1,800 rpm

if required. This leads to an increased air volume flow of 115 m<sup>3</sup>/h. The vacuum pumps are consequently more efficient.

### 4. Precise Control – No Further Adjustment

A PI controller is used as a means of control. The reference value of the vacuum is controlled by a rotary potentiometer in the control panel of the switch box. The adjusted vacuum is maintained during the complete phase of lowering the water table. The usual re-adjusting of the bleeder valve on the vacuum generator is not required.



The energy consumption of dewatering units is determined by different parameters.

Along with the conditions of the soil, the water-table as well as the professional installation of the well point system the system engineering used is responsible for the energy consumption.



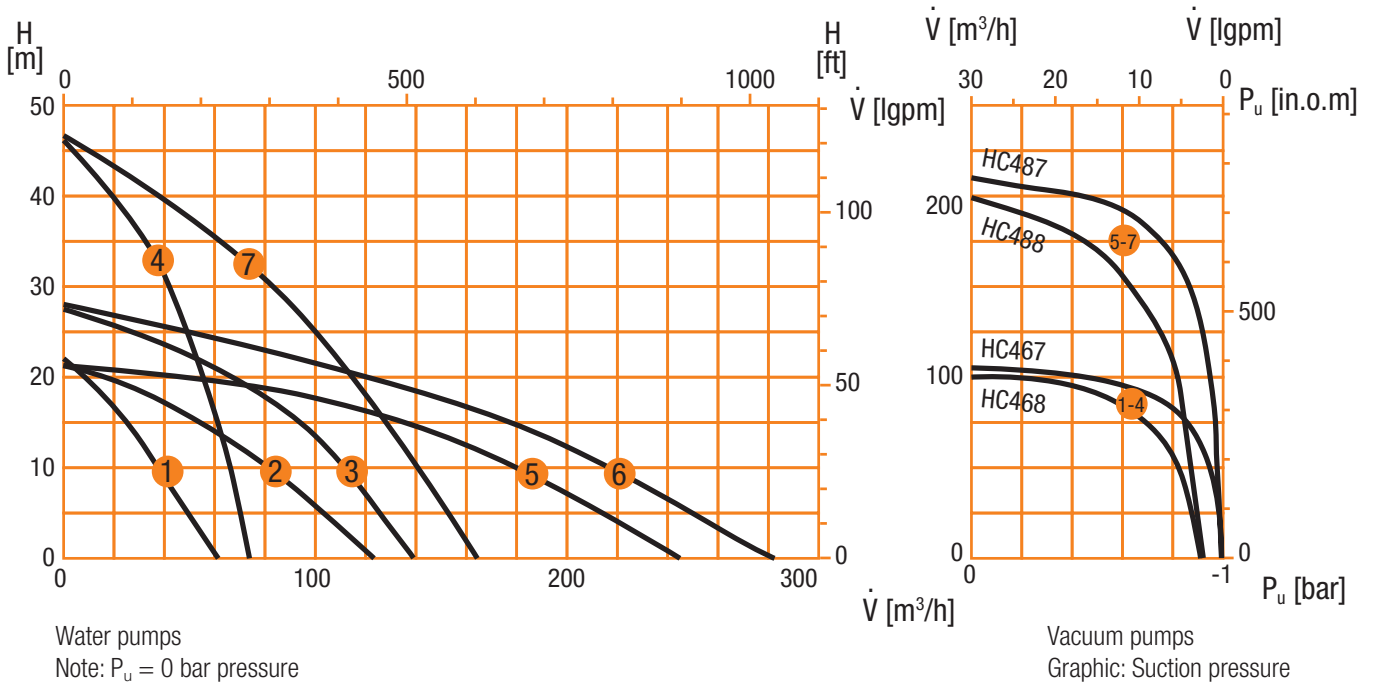
### Reliable Control Units

The switching operation of the water- and vacuum-pumps is set by electrodes. This type of control has the advantage over the method of dial-swimmer switch-control of being not too sensitive. The electronic components used are standard parts. That ensures a fast supply of spare parts in case of a faulty part. The use of a so-called phase sequence always ensures the correct direction of the rotation.



*Reliable Control Units*

# Head Curve



# Technical Data

Head Curve No.	Type	Water Pump				Vacuum Pump		Motor – Input Power <sup>1)</sup>		Shipping dimensions	
		Capacity	Head	Connection <sup>2)</sup>	Capable Solid Size	Capacity	Vacuum	Power consumption <sup>5)</sup>		Length x Width x Height	Weight
		$V_{max}$	$H_{max}$	$\frac{DN_s^{4)} }{DN_d}$	$\emptyset$	$V_{max}$	$p_{u\ max}$	$P_n$	$P_{max}$	$l \times w \times h^{3)}$	m
		m <sup>3</sup> /h	m	mm	mm	m <sup>3</sup> /h	bar	kW	kW	mm	kg
1	HC 467/05	60	22	$2 \times 108 V^{4)}$	9	105	-0.99	2.7	5.7	1.595 × 1.340 × 1.470	457
	100					-0.92	493				
2	HC 467/15	122	21	$1 \times 108 V$	10	105	-0.99	4.5	7.5		470
	100					-0.92	506				
3	HC 468/25	140	28	$2 \times 159 V$	10	105	-0.99	6.7	10.7		479
	100					-0.92	515				
4	HC 468/35	76	46	$2 \times 108 V$	10	105	-0.99	6.7	10.7		476
	100					-0.92	512				
5	HC 488/15	244	21	$2 \times 108 V$	10	210	-0.99	7.5	12.0		631
	200										-0.92
6	HC 488/25	280	28	$2 \times 159 V$	10	200	-0.92	9.7	16.4	1.895 × 1.650 × 1.400	645
	210										-0.99
7	HC 487/35	152	46	$2 \times 108 V$	10	210	-0.99	9.7	16.4	640	
	200									-0.92	727

Subject to technical changes to the scope of delivery. 03/2016

- 1) Alternating current 400 V, 50 Hz
- 2) Other connections available on request
- 3) l=without tow-bar

- 4) V = male connection
- 5) By control system: 107 680... (HC 467/..), 107 681... (HC 487/..), 111 815... (HC 468/..), 111 816... (HC 488/..)



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