



**HUS**

Screw channel pumps



# Hus Screw channel pumps

*HUS screw centrifugal pumps are excellent pumps for media containing long fibers. HUS pumps offer a real guarantee: less wear, longest lifetime. Also for sludge and slurries, paper & pulp, energy power stations and many other high solids containing products the HUS pump is an excellent solution. Many thick and polluted fluids are very hard to pump. High energy cost and huge maintenance cost are the main issues when pumping these fluids. The screw impeller has an open channel impeller design. Because of the combination of an open channel and the centrifugal forces high flow rates and a huge efficiency are accomplished.*



To lower operating cost HUS has developed a screw channel pump targeted on high efficiency and low operation cost. The special impeller ensures a high efficiency (also when pumping thicker fluids) and a wide passage/outlet. No problems anymore with Long fibers that may tangle and wrapped. Because of the very clever and solid design of the pump, maintenance cost are very low.

Flow range	max 1500 m <sup>3</sup> /h
Head	max 75 mwc

## Features and advantages

- High efficiency, BEP > 70%
- Insensible for clogging, also when pumping long fibred fluids
- Insensitive for viscosity changes
- Suitable for gas containing media
- Low energy cost, almost constant
  - also at higher flow ratings
- Low maintenance cost
- Double mechanical seal with controllable oil chamber

- Dry or submersible pumping
- Smooth pumping action for eg greeneries and fisheries
- No emulsification
- Gentle handling of fluids

Screw channel pumps are being used in a wide range of industrial areas:

## Water treatment

Thick sludge, Thickened media, slurries, sewage, waste water

## Food & Beverage

Diatomaceous earth, slurry, yeast, sugar, gelatin, hop, corn, malt

## Agriculture

Chicken necks, bones, compost, biogas, pet food

## Other

Paper pulp, thick fluid streams in power stations  
HUS screw channel pumps achieve the best efficiency in comparison with other pump systems of the same size



## Working principle

*An impeller that is formed as a corkscrew lays in a cone shaped casing. The impeller has also the working principle of a corkscrew. Through the rotation of this screw the fluid is literally being pushed away.*

The cone form of this pump ensures a blockage free operation. The efficiency of the pump is becoming better when the viscosity of the fluid becomes higher. The pump can handle solids up to 13%.

Comparative tests have shown that the patented HUS screw channel pump achieves the best efficiency in comparison with other pump systems of the same size.

## OVERVIEW OF PUMP MODELS

The HUS channel screw pump is available in 6 sizes from 50 – 200 mm. With its numerous options the pump offers a high variety of possibilities to serve a wide range of application areas.

Flow range	max 1500 m <sup>3</sup> /h
Head	max 75 mwc

**Series S Standard construction with shaft sealing**  
With shaft sealing

**Series V Patented cantilever version**  
Without need of a shaft seal for high abrasive liquids

### Model B Close coupled

#### Type BH Base plate mounted

close coupled on horizontal base plate

#### Type BV Vertical execution

Close coupled on a duck foot standard



### Model T Submersible

#### Type TA Submersible pump

For water purification with an automatic coupled pedestal

#### Type TP Portable submersible pump on foot



### Model L Long coupled

#### Type L- Standard long coupled

#### Type LV Long coupled with V belt drive





## Materials of construction

Housing	GG	SS 316 (1.4408)
Impeller	GGG	SS 316 (1.4408)
Back housing	GG	SS 316 (1.4408)
Shaft	1.4021	SS 316 (1.4408)



## Options

### Sealing

- Wear resistant double mechanical seal with oil chamber, in standard execution with hard metal seal surfaces at the fluid side.
- Gland packing

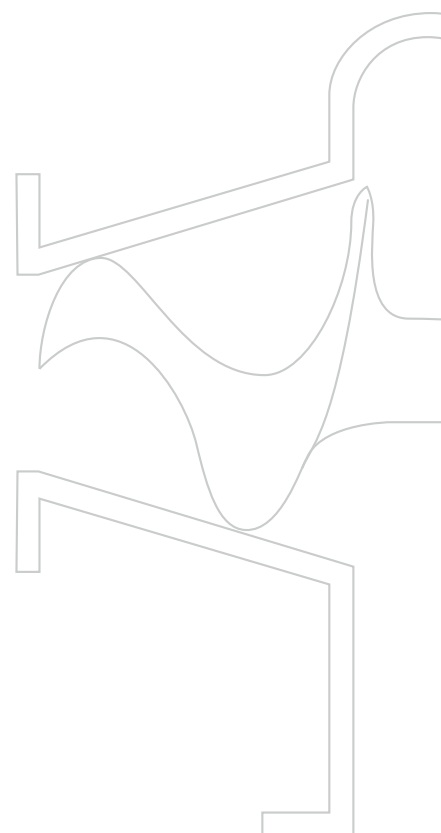
### Motors

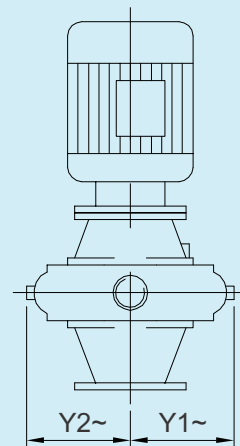
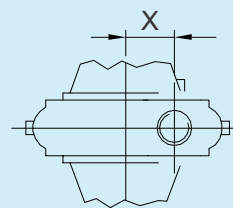
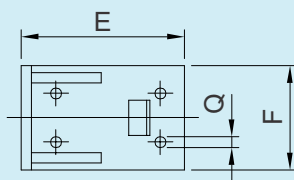
The HUS pumps are as a standard executed with IEC motors. Of course, a wide variety of motor choices is available to serve your special needs.

### Options

To meet with the most difficult media and to offer best chemical resistance HUS pumps have a wide variety of options. For highest abrasive, corrosive and cavitation resistance HUS offers following options.

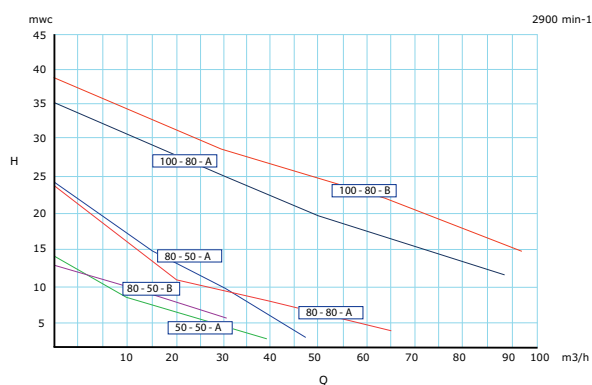
- Gas nitrited impeller and pump casing up to 64HRC at 0,5 mm
- Flame hardened impeller
- Plasma nitrite rustproof impeller
- Impeller in SS316
- Trimmed Impeller
- Wetted parts in SS316
- Rilsan coated
- PU coated
- Cutting device grooves on the inlet conus
- ATEX certification



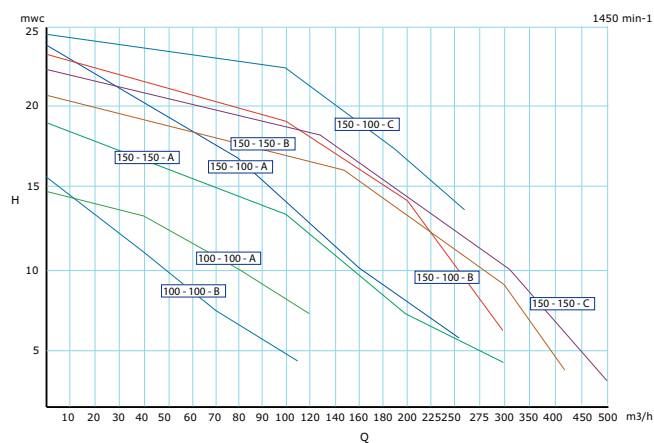


## Technical details

Type	Connections		Flow		BEP	Impeller	Motor
	Suction	Discharge	rpm	Max.m <sup>3</sup> /h			
50-50-A	50	50	2900	39	62	A	1.5
80-50-A	80	50	2900	48	71	A	1.5
80-50-B	80	50	2900	32	69	B	3
80-80-A	80	80	2900	65	73	A	3
100-80-A	100	80	2900	87	62	A	5.5
100-80-B	100	80	2900	96	62	B	5.5
100-100-A	100	100	1450	108	78	A	5.5
100-100-B	100	100	1450	118	73	B	4
150-100-A	150	100	1450	252	76	A	5.5
150-100-B	150	100	1450	295	76	B	5.5
150-100-C	150	100	1450	270	69	C	5.5
150-150-A	150	150	1450	320	76	A	15
150-150-B	150	150	1450	440	77	B	15
150-150-C	150	150	1450	500	77	C	22
200-150-A	200	150	1450	620	78	A	30
200-150-B	200	150	1450	720	78	B	37
250-200-A	250	200	1450	1030	78	A	90
250-200-B	250	200	1450	800	75	B	75
250-200-C	250	200	1450	950	75	C	55

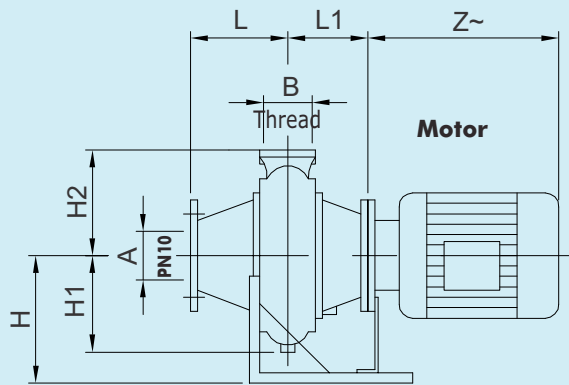


Flow range < 100 m<sup>3</sup>/h

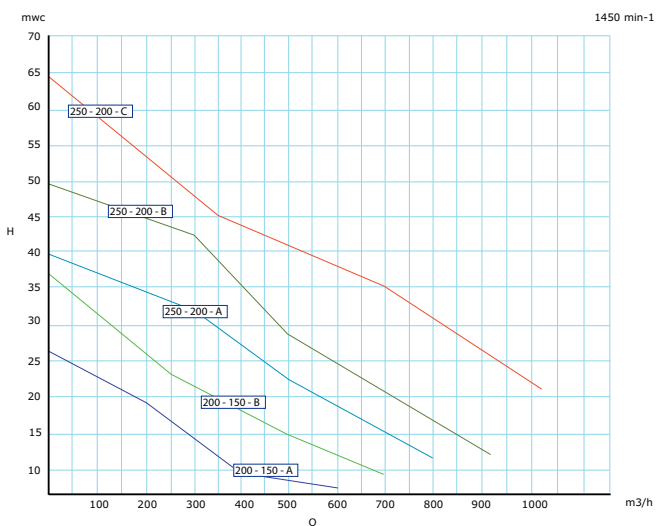


Flow range 100-500 m<sup>3</sup>/h





Type	A	B	E	F	H	H1	H2	L	L1	Q	X	Y1	Y2	Z~/kW	motor/class IEC
50-50	50	2"	250	150	160	110	105	98	164	14	70	110	110	250/1.1	70/80
80-50	80	2"										98	115	270/1.5	90
80-80	80	80	250	150	160	120	150	98	170	14	0	98	115	270/2.2	90
100-80	100	80	350	300	240	160	220	135	223	14	0	170	145	270/1.5	90
									285					420/5.5	132
100-100	100	100	400	300	290	188	250	173	224	14	0	202	170	320/3	100
									300					420/5.5	132
150-100	150	100	500	400	330	190	250	257	300	14	0	200	170	492/11	160
									300					533/15	160
									251					400/5.5	132
150-150	150	150	500	400	330	240	300	253	296	14	0	256	196	492/11	160
									296					533/15	160
									262					400/5.5	132
200-150	200	150	750	500	400	225	300	340	345	20	0	225	225	669/22	180
									370					669/30	200
									427					725/37	225
									345					492/15	160
250-200	250	200	750	500	400	365	450	390	443	20	0	414	320	742/55	250
									443					938/75	280
									443					938/90	280



Flow range > 500 m³/h



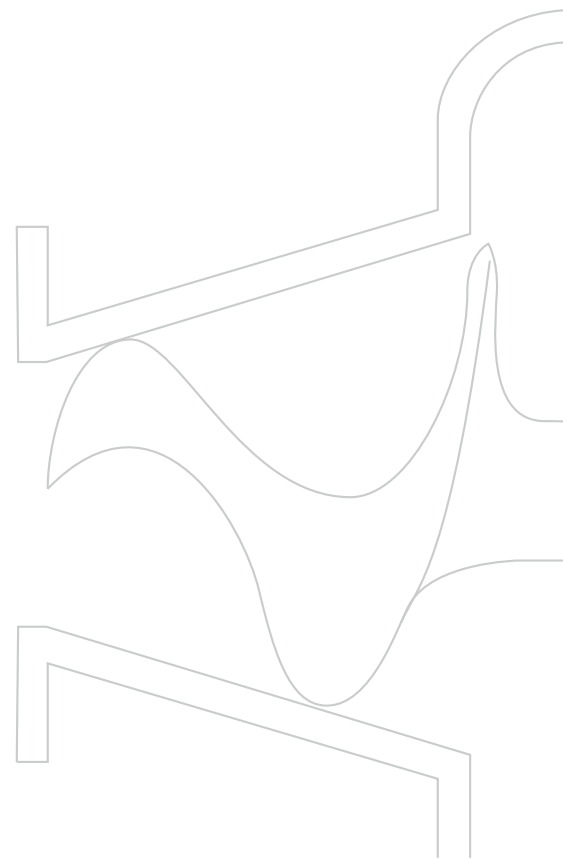
## Pump Coding System

<b>H</b> Brand	<b>S</b> Serie	<b>BH</b> Model	<b>80</b> Ø inlet	<b>80</b> Ø outlet	<b>B</b> Impeller Form
H = HUS	S = Standard V = Variable	BH = close coupled horizontal BV = close coupled vertical TA = submersible + pedestal TP = submersible portable L = long coupled LB = long coupled V-belt	50 80 100 150 200 250	50 80 100 150 200	A B C

## Applications

Sewage water treatment plants  
 Wastewater treatment plants  
 Paper industry  
 Food  
 Agriculture  
 Circulation of biogas  
 Coal-fired, oil-fired and nuclear  
 power plants  
 Composting and recycling  
 processes

Slaughter houses  
 Sugar industry  
 Beverage industry  
 Sewage sludge recirculation  
 Sewage thickening systems  
 Gelatin manufacture  
 Pet food  
 Breweries & Malteries  
 Waste burning power station



# About HUS

*Started 1982, HUS specialized itself in pumps for sewage and abrasive liquids. The former owner, Mr. Hans Ulrich Schneider, has developed a comprehensive range of very long lasting pumps in a fine Swiss quality.*

Having started with dry mounted pumps, he realized the importance of the sewage applications and started developing submersible pumps. Over the time, specific pumping applications have asked for more and more specials like hardened surfaces, coatings and stainless steel versions. In 2003, Mr. Schneider retired and CATAG continued to produce this Swiss quality pumps now based on digital drawings and order flow.

ATEX compliance and conformity has been achieved in 2004. Since then, HUS-Pumps are pumping many explosive product save and reliable.

The Verder Group assures since 2010 the continuity of the development and production as well as the distribution and sales of HUS-Pumps.







# The Verder Group

## Passion for pumps

*Liquids handling is the original passion of the Verder Group.  
Its liquids handling companies supply a wide range  
of first-class pumps for a variety of industrial purposes.*

Verder Liquids is active in many industrial sectors: chemical and process industry, food, pharmaceutical, water treatment, and environmental industries.

Within these industries pump requirements vary enormously and applications and needs change frequently. In order to ensure we provide the best solutions. We analyse and monitor industrial trends as well as maintaining close relationships with our customers.

### **International presence**

The Verder Group Liquids division has affiliates in:

Austria - Belgium - China - Czech Republic - France - Germany - Great Britain - Hungary - The Netherlands - Poland - Romania - Slovakia - South Africa - Switzerland - USA

### **Your advantages**

The advantages of working with us are clear, we offer you:

- Single-source solutions: Verder's wide and complementary range of pumps allows you to source your entire pumping needs from one company, reducing your costs;
- Expertise: years of providing pumping solutions to industry have given us valuable expertise and knowledge which we are able to use to supply the most appropriate and reliable pumps;
- International affiliated company: our size gives you the confidence that you are dealing with a powerful international pump company and if your project involves overseas work then you can profit from our international network of companies.

### **Contact Verder**

If you would like to know more about our pumping solutions then please visit our website [www.verder.com/liquidshandling](http://www.verder.com/liquidshandling).

You will find the full range of our pump ranges as well as application stories, latest news and the contact details of our local specialist.



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