

SWISS
QUALITY+



HUS

Screw channel pumps



VERDER
passion for pumps

HUS Screw channel pumps

HUS screw channel 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 ³ /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



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 ³ /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

	STANDARD	STAINLESS
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

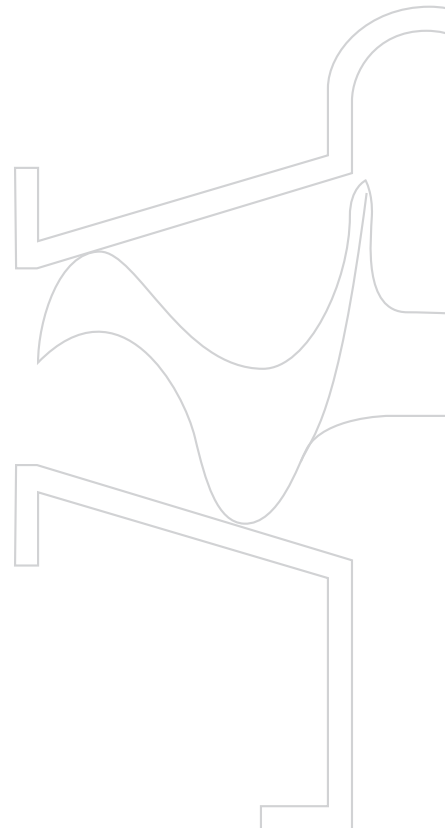
Motors

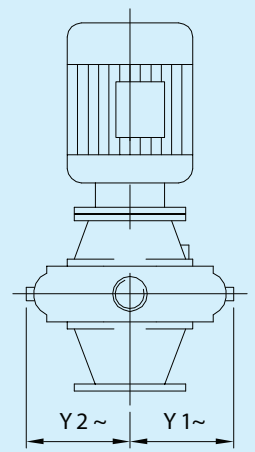
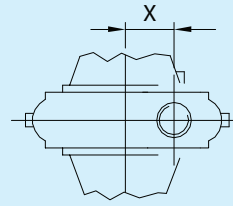
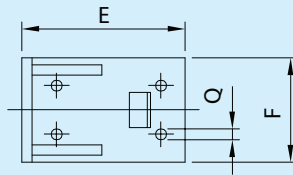
The HUS pumps are as a standard executed with IEC motors. Of course, a wide variety of motor choices is available to serve your special needs.

Options

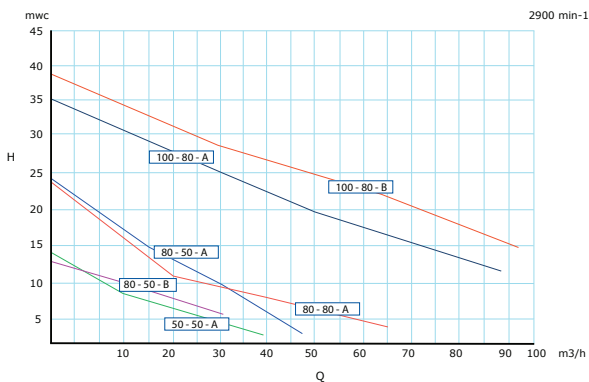
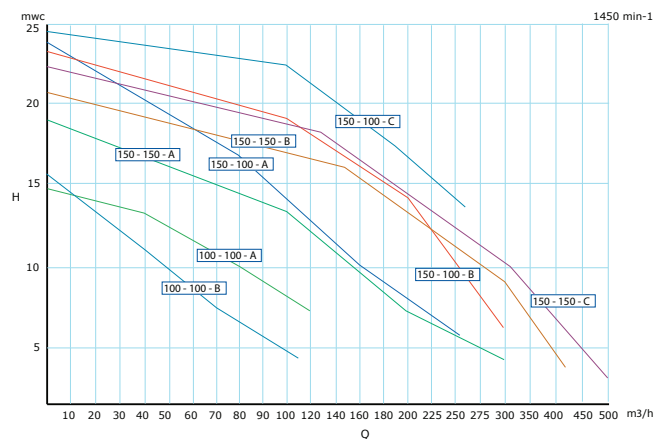
To meet with the most difficult media and to offer best chemical resistance HUS pumps have a wide variety of options. For highest abrasive, corrosive and cavitation resistance HUS offers following options.

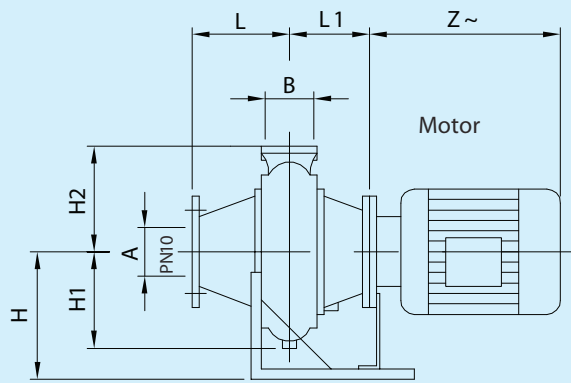
- Gas nitrited impeller and pump casing up to 64HRC at 0,5 mm
- Flame hardened impeller
- Plasma nitrite rustproof impeller
- Impeller in SS316
- Trimmed impeller
- Wetted parts in SS316
- Rilsan coated
- PU coated
- Cutting device grooves on the inlet conus
- ATEX certification



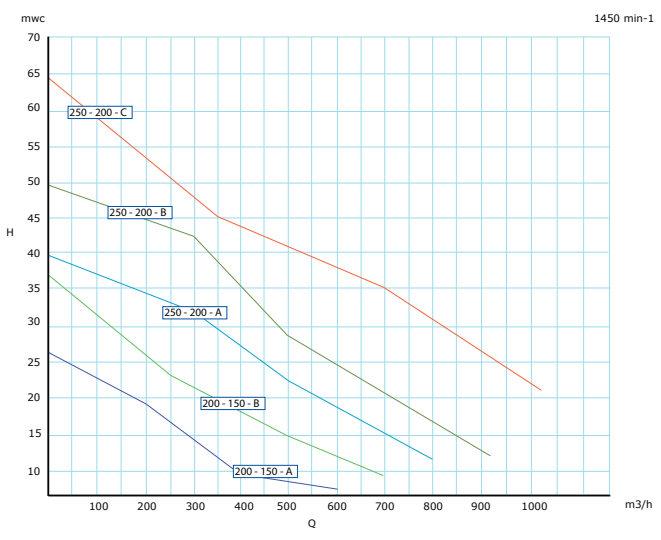

Technical details

Type	Connections		Flow		H	BEP Qopt.(m³/h)	Impeller Type	Motor Max. kW
	Suction	Discharge	rpm	Max.m³/h				
50-50-A	50	50	2900	39	62	22	A	1.5
80-50-A	80	50	2900	48	71	31	A	1.5
80-50-B	80	50	2900	32	69	25.1	B	3
80-80-A	80	80	2900	65	73	42.5	A	3
100-80-A	100	80	2900	87	62	56.5	A	5.5
100-80-B	100	80	2900	96	62	69	B	5.5
100-100-A	100	100	1450	108	78	72	A	5.5
100-100-B	100	100	1450	118	73	79	B	4
150-100-A	150	100	1450	252	76	170	A	5.5
150-100-B	150	100	1450	295	76	190	B	5.5
150-100-C	150	100	1450	270	69	155	C	5.5
150-150-A	150	150	1450	320	76	210	A	15
150-150-B	150	150	1450	440	77	280	B	15
150-150-C	150	150	1450	500	77	300	C	22
200-150-A	200	150	1450	620	78	400	A	30
200-150-B	200	150	1450	720	78	490	B	37
250-200-A	250	200	1450	1030	78	750	A	90
250-200-B	250	200	1450	800	75	530	B	75
250-200-C	250	200	1450	950	75	630	C	55


Flow range < 100 m³/h

Flow range 100-500 m³/h



Type	A	B	E	F	H	H1	H2	L	L1	Q	X	Y1	Y2	Z~/kW IEC	motor/class
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
														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



Applications

- Agriculture
- Beverage industry
- Breweries & Malteries
- Circulation of biogas
- Coal-fired, oil-fired and nuclear power plants
- Composting and recycling processes
- Food
- Gelatin manufacture
- Paper industry
- Pet food
- Slaughter houses
- Sugar industry
- Sewage sludge recirculation
- Sewage thickening systems
- Sewage water treatment plants
- Waste burning power stations
- Wastewater treatment plants

Pump Coding System

H	S	BH	80	80	B
Brand	Series	Model	Ø inlet	Ø outlet	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





About HUS *High efficiency Universal Screw channel pumps*

Started 1982, HUS produces pumps for sewage and abrasive liquids. This resulted in an comprehensive range of very long lasting pumps in a fine Swiss quality.

Originally started with dry mounted pumps, soon the importance of sewage applications became clear and an additional range of submersible pumps was developed.

Over the time specific pumping applications have asked for more and more specials such as hardened surfaces, coatings and stainless steel versions.

Nowadays Verder is producing these first class Swiss quality screw channel pumps based on digital drawings and logistic order flow.

ATEX compliance and conformity has been achieved in 2004. Since then, the HUS pumps are pumping many explosive media, always safe and reliable!

Since 2010 the Verder Group assures the continuity of the development and production of HUS pumps, as well as their distribution and sales.



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 - Great Britain - Hungary - The Netherlands - Poland - Romania - Slovakia - South Africa - Switzerland - USA

Your advantages

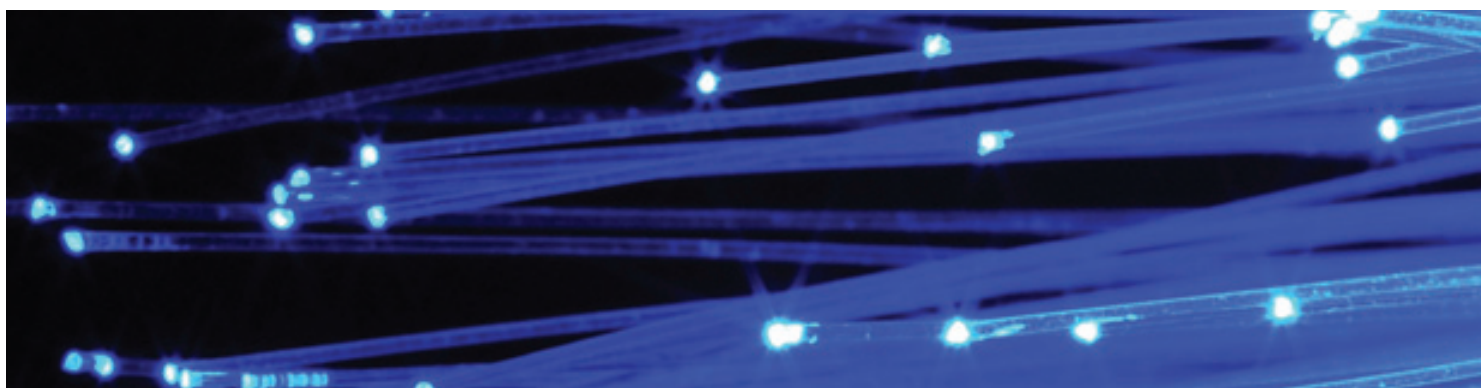
The advantages of working with us are clear, we offer you:

- 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.

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.



Any questions? You may still have questions and/or comments after reading this brochure. Please feel free to contact us on +41 (0)61 373 73 64. You can also respond via email to info@hus-pumps.com. For more information about HUS pumps please visit our website www.hus-pumps.com

