



VTP
VERTICAL TURBIN PUMP

Approvals

IEC		IECEE		CB TEST CERTIFICATE		Ref. Certificate No.	
						CH-5876	
IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME							
Issued by:	Electrosuisse						
Product:	Horizontal and vertical multistage pump						
Applicant:	Swiss Pump Company AG	Mosweg 36	CH-3645 Gwatt (Thun)	Switzerland			
Manufacturer:	Swiss Pump Company AG	Mosweg 36	CH-3645 Gwatt (Thun)	Switzerland			
Factory:	Swiss Pump Company AG	Mosweg 36	CH-3645 Gwatt (Thun)	Switzerland			
Rating and principal characteristics:	3 x 355 - 377/348 - 480V~, 50/60Hz; 220-230V~, 50/60Hz; 127-230-240V~, 60Hz; class I, IP55						
Trade mark (if any):	Swiss Pump Company AG (SPCO)						
Model/Type reference:	HM..., CH..., VM..., CD..., ND..., CC..., PC..., MB..., QB..., SMF..., CCP..., SCP..., see appendix type list in test report						
Additional information:	---						
Sample of product tested to be in conformity with IEC:	60325-1ed4.1am1.am2 60325-3-41ed3.1am1.am2			National differences: EU Group Differences; EU Special National Conditions; EU A-Deviations			
Test Report Ref. No.:	06-HQ-0218.01 + .02 + .03 + .05						
<p>This CB Test Certificate is issued by the National Certification Body:</p> <p>Electrosuisse Luppenstrasse 1, CH-8320 Fehraltorf</p> <p>Signed by: <i>Erich Christ</i> 2010-07-27</p> <p>electrosuisse</p> <p>page 1 of 1</p>							

IQNet	
THE INTERNATIONAL CERTIFICATION NETWORK	
CERTIFICATE	
IQNet and SQS hereby certify that the organisation	
Swiss Pump Company AG	
3645 Thun-Gwatt	
Switzerland	
Certified area	
Whole company	
Field of activity	
Manufacture and sale of products for the transportation of liquids	
has implemented and maintains a Management System which fulfills the requirements of the following standard(s)	
ISO 9001:2008	
Scope No(s): 17, 18, 19 Issued on: 2015-03-03 Validity date: 2018-03-02 Registration Number: CH-32160	
 Michael Drechsel President of IQNet	 Roland Glauser CEO SQS
<p><small>IQNet Partners*:</small></p> <p>AENOR Spain AFNOR Certification France AIB-Vincotte International Belgium ANCE-SIGIE Mexico APCER Portugal CCC Cyprus CISQ Italy CQC China CQM China CQS Czech Republic Cvi Cert Croatia DQS Holding GmbH Germany FCM Brazil FONONORIMA Venezuela ICONTEC Colombia IMC Mexico Inspecta Certification Finland IRAM Argentina JQA Japan KQ Korea MIRTEC Greece MSZT Hungary Nemko AS Norway NSAI Ireland PCBC Poland Quality Austria Austria RS Russia SI Inet SIQ Slovenia SROM QAS International Malaysia SQS Switzerland SRAC Romania TEST St Petersburg Russia TSE Turkey YUQS Serbia IQNet is represented in the USA by: AFNOR Certification, CSO, DQS Holding GmbH and NSAI Inc.</p> <p><small>* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com</small></p>	





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Application

Municipal Water
Industry
Power generation
Oil and Gas Production
Storm Water
Irrigation

Features

High Efficiency

Saving 30% of this energy is possible with a good system design and well designed Pump. With this awareness of purpose is to produced pumps with high efficiencies up to 93 %. The most Important Criteria is the life cycle cost.

Different Material Option

SPCO gives a great material selection option to the customers for different applications such as cast Iron, cast steel, non-alloyed and low alloy steel grades, stainless crNi steel grades, duplex and super duplex grades , Bronze Ni-Al Bronze and others.

Quality Assurance

Quality control is a continuous process . It starts from the quotation phase , ordering phase, Manufacturing process , Insulation and operation phase , Warranty Period and after sales operations.

Test Capabilities:

Performance Test
Noise Level testing
Vibration analysis

Machinery

Boring Machines up to 2500mm diameter , vertical and horizontal lathes and individual production equipment supports an efficient and flexible manufacturing process

Specifications

Suction Bell

Each Suction bell includes entrance guide vanes to prevent prerogation while guiding the liquid flow parallel to the drive shaft for maximum efficiency. Suction bells can be fitted with strainers to restrict entry of foreign objects during operation.

Impeller

Impeller enclosed or semi-open are precisely trimmed and balanced to reduce vibration and wear .Impellers are secures firmly to the shaft by means of a key and split thrust ring or by a taper colled for small pump sizes.

Bowls

Bowl Guide vanes are precisely designed for the maximum conversion of kinetic energy to the pressure energy to achieve peak efficiency. The bowls are flanged and the material selection is made according to the pumping fluid. Bowls can be enameled plastic or ceramic coated to reduce the friction loss and to maintain a protective layer . Single or Dual bronze and rubber bearings provide alignment and dampen vibration . Bowls are supplies with a replicable wear rings.

Shafts

The pump shaft is divided into three sections: head shaft, line shaft and bowl shaft. Shafts are turned, ground and polished and the material selection varies depending on the application .The shaft is tailor made to the service needs and sized individually for each insulation; calculated for maximum torque.

Discharge head

Discharge head consists of surface or underground sectional elbow. Heads are variable in high strength cast Iron ,fabricated steel or other materials that are compatible to the pumped fluid. Heads may be coated internally to further resist product corrosion.

Shaft seal:

Options are provided for reliable sealing and simple maintenance including gland packing and various mechanical seal arrangements.

Column assembly

Column pipes can be threaded or flanged according the size and customer request. Pipes are machined between the centers to ensure perfect alignment. The lubrication of the column assembly can be three ways:

Oil Lubrication: Oil is supplied to bronze line shaft bearings by an oiler, secured on the motor base. Oiler can be hand operated or solenoid for automatic lubrication. Oil lubricated columns contain a line shaft enclosing tube. The suction bell bearing is packed with water resist grease, ensuring long period operation.

Grease Lubrication: Grease is supplied to bronze line shaft bearings by a grease pump, secured the motor base.

Water Lubrication: The rubber line shaft bearings are lubricated by the pump water. The suction bell bearing is grease lubricated.

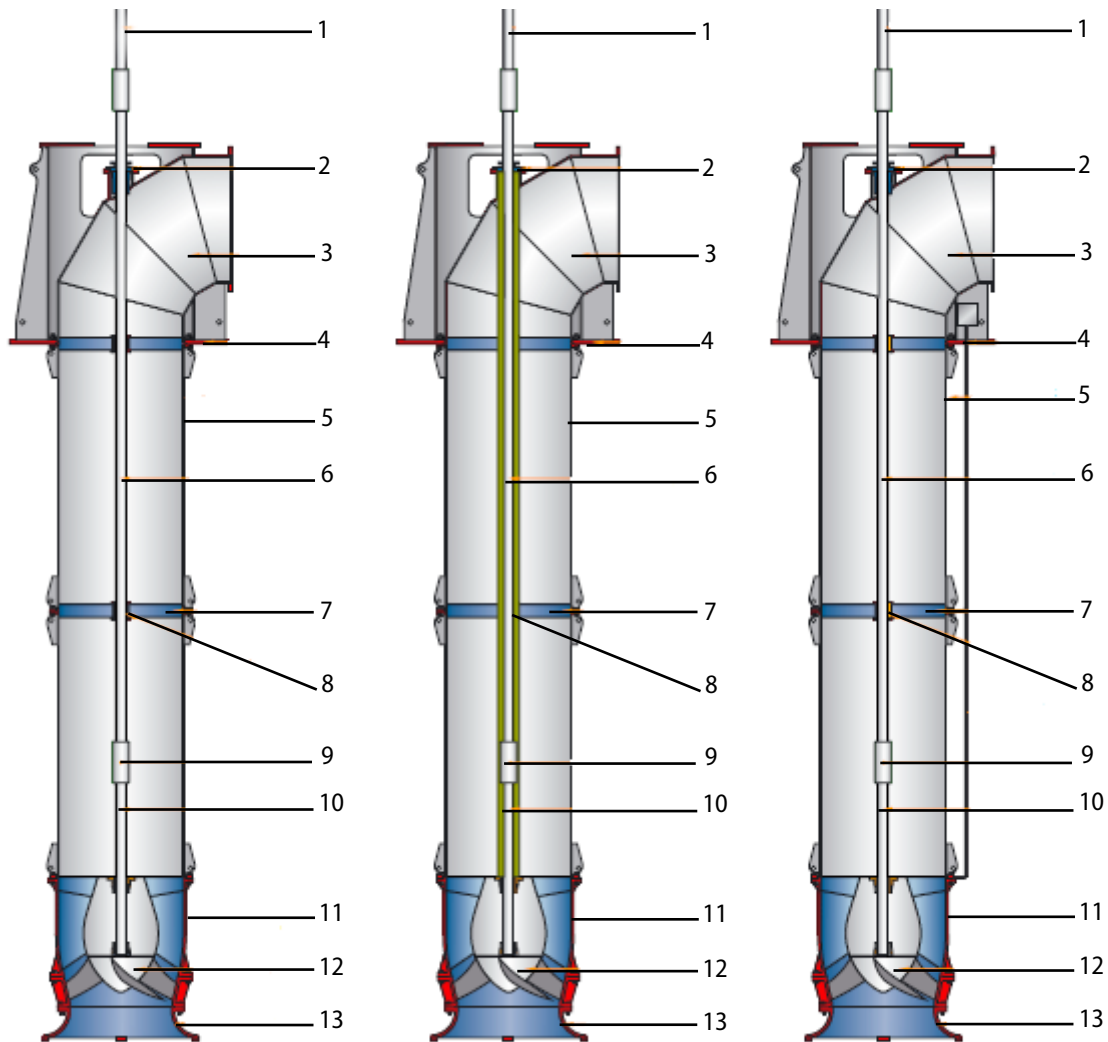
Drivers

Vertical electric motors are connected directly to the pump.. With hollow shaft motors; the pump down thrust is carried by a thrust bearing built in motor. The drive shaft extends up o through the motor shaft and is properly secured at the top.

With solid shaft motors, the head shaft is connected to a heavy oil lubricated ball bearing thrust assembly, located on the pump base plate. If the thrust load is more than the ball bearing assembly capacity then tilting pad type bearings are located on the base plate. Bearings are oversized to assure a minimum life of 40.000 hour operation.

Horizontal electric motors or internal combustion engines are connected to the pump through suitable right angle gear drive or belt drive.

Structural parts



Item	Description	Material
1	Head Shaft	AISI 420
2	Stuffing Box	ASTM A48
3	Discharge Elbow	ASTM A48/Fabricated Steel
4	Base Plate	ASTM A48/Fabricated Steel
5	Column Pipe	Fabricated Steel
6	Line Shaft	AISI 420/ AISI316
7	Bearing Retainer	ASTM A48
8	Bearing	Rubber / SAE 63
9	Shaft Coupling	AISI 420/ AISI316
10	Pump Shaft	AISI 420/ AISI316
11	Diffuser	ASTM A48
12	Impeller	ASTM A48 / SAE 63 / AISI 316
13	Suction Bell	ASTM A48
14	Grease Tube	AISI 316

Performance Range

Vertical Flow Turbine Pumps:

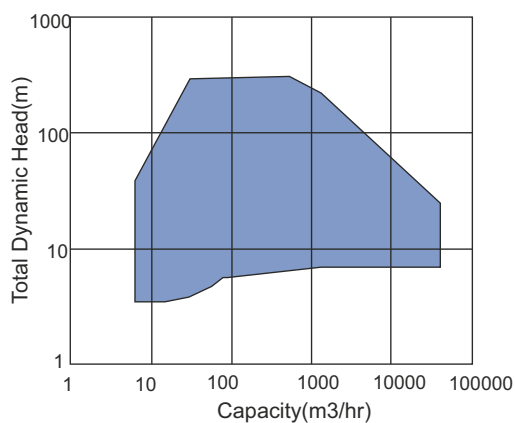
- . Q : 10-30.000 m³/h Capacity and head up to 600m.
- . Water, Oil and greae Lubricated options

Axial Flow Turbine Pumps:

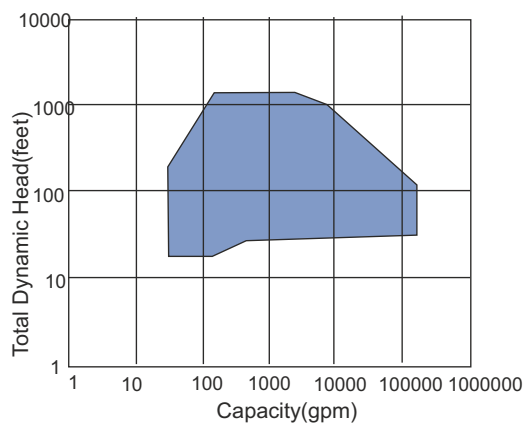
- . Q : 900-20.000 m³/h Capacity and head up to 8m.
- . Water, Oil and grease Lubricated options

Mixed Flow Vertical Turbine Pumps:

50 Hz

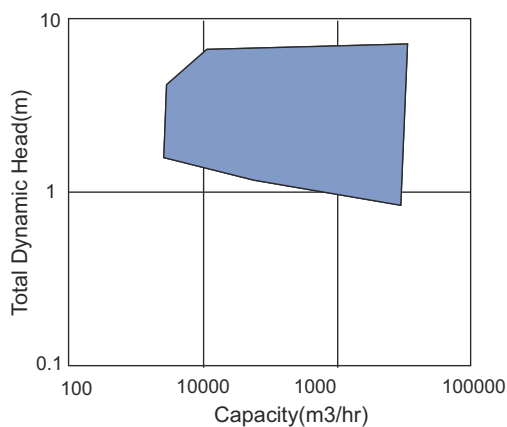


60Hz

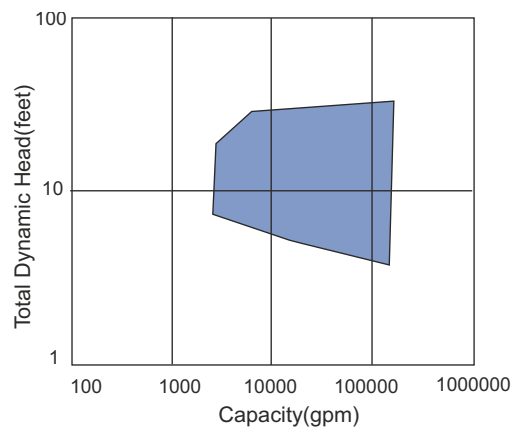


Axial Flow Vertical Turbine Pumps:

50 Hz



60Hz







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