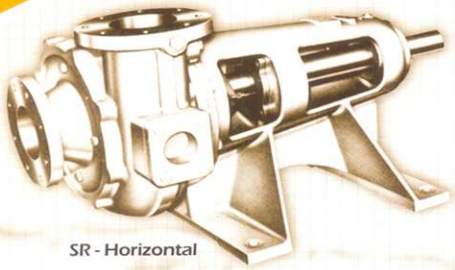
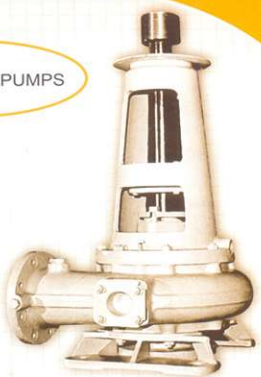
Swallowglide

END SUCTION PUMPS



SR - Horizontal



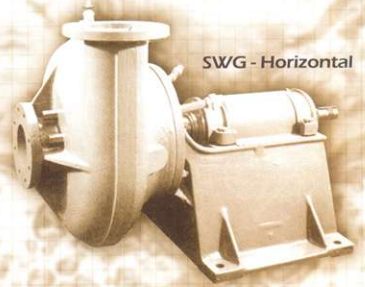
SR - Vertical

Pumps for sugar, steel, sewage & effluent plants

Fibroglide

SPM - Horizontal

Pumps for paper & pulp industries



SWG - Horizontal

Pumps for sludge & solids in suspension

BEACON WEIR LIMITED

beacon WEIR

Swallowglide

Type - SWG / SR

Capacity Range

Suc. x Del. Size : 76mm x 51mm - 450mm x 450mm

Discharge : 25 - 5000 m^3/h
Head : 5m - 55m

Soft solid size handled by the pump : 79mm - 143mm

The **Swalloglide Type SWG and SR centrifugal pumps** are designed specifically for highly efficient and trouble-free service in sugar, steel, sewage and effluent treatment applications. Both horizontal and vertical driven shafts are designed to meet the requirements.

Features

CASING - Pump casing is designed to give high efficiency, long life under abrasive conditions and wide internal passages to pass large solids that are in suspension. To protect the casing from wear and to assist easy maintenance, a renewable plate is fitted on the suction internal face when open type impellers are used. For closed type impellers, a casing neckring is provided. A hand hole cover is provided to facilitate easy access to the moving parts.

IMPELLER - The impeller is normally of two or three port open type, symmetrical and dynamically balanced. The vanes are provided with specially formed edge tips to dislodge and carry away any solid matter from the working face thus reducing wear and eliminating clogging and jamming. Balance blades are cast on the back of the impeller to prevent solid matter from reaching the stuffing box.

STUFFING BOX - Soft cotton packing is used as standard for gland sealing, but a mechanical seal can be supplied when required. The stuffing box is provided with clean water connections to the gland and impeller back blades for use as required. A grease sealing arrangement for the gland packing can be provided in the absence of a clean water supply.

SHAFT - The shaft is of high tensile steel, large diameter, lightly stressed to give rigidity in excess of normal requirements, thus ensuring long life even under the most adverse operating conditions. It has renewable sleeves and is fully protected from contact with the liquid being pumped.

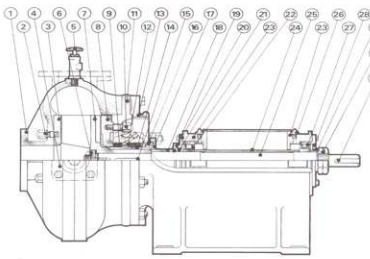
BEARINGS - The standard bearing arrangement comprises a highly rated ball bearing and a roller bearing. The bearings are grease lubricated and adequately protected from moisture and dust. Their sizes are above normal requirements in order to ensure long life and satisfactory running.

FLANGES - Suction & Delivery flanges are drilled to BS standards.

DIRECTION OF ROTATION - Clockwise when viewed from drive end.

SWALLOWGLIDE 'SWG' TYPE SECTIONAL DRAWING

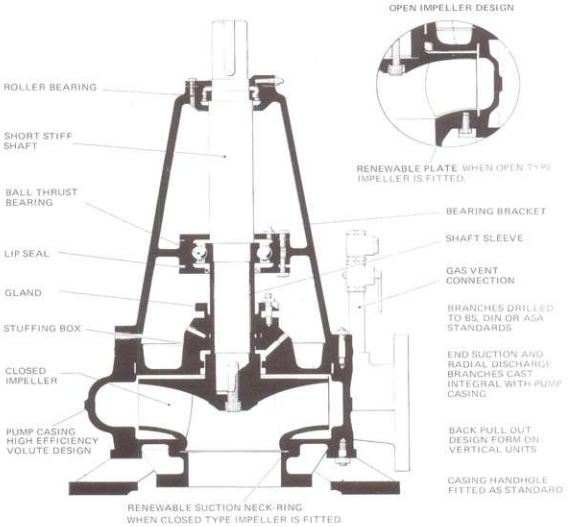
1 Pump Casing
2 Stud and Cap Nut
3 Renewable Plate (suct.)
4 Handhole Cover (when required)
5 Air Cock
6 Impeller Cap
7 Impeller
8 Renewable Plate (Stuffing Box)
9 Gland Packing
10 Stud
11 Stuffing Box
12 Lantern Ring (split)
13 Cradle Base
14 Impeller Sleeve
15 Impeller Key



16 Gland Ring (split)
17 Gland Flange
18 Distance Sleeve
19 Wire Joint
20 Inside Bearing Cap
21 Water Thrower
22 Roller Bearing
23 Bearing Housing
24 O Bearing Sleeve
25 Pump Shaft
26 Grease Nipple
27 Ball Bearing
28 Thrust End Cap
29 O Coupling Sleeve
30 Shaft Nuts
31 Coupling Key

SWALLOWGLIDE : SR TYPE

DESIGN FEATURES AND MAIN PARTS



Drive Arrangements

Four arrangements are available to meet the requirements for various types of drives:

Horizontal:

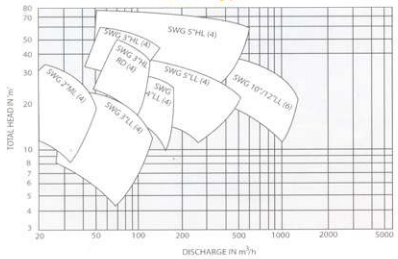
1. Direct coupled to prime mover.
2. 'V' belt drive from prime mover.

Vertical:

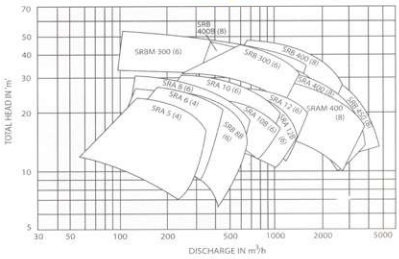
1. Long coupled. Shaft drive from prime mover on upper floor.
2. Close coupled. Motor mounted direct on pump bearing bracket.

Water Rating Chart

'SWG' Type

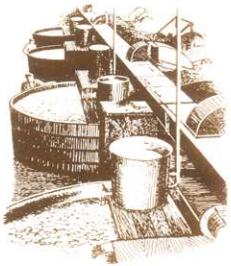


'SR' Type



Fibroglide

Type - SPM



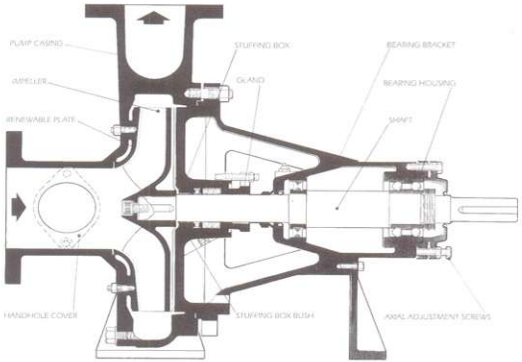
Capacity Range

Suc. x Del. Size	: 100mm x 80mm - 250mm x 200mm
Discharge	: 4 lps - 210 lps
Head	: 5m - 60m
Stock Consistencies	: Upto 6%

The **SPM range of Fibroglide paper stuff pumps** are designed to meet the sophisticated paper making technologies in mills throughout the world. In developing this range we have drawn on our experience in the design and operation of centrifugal pumps to handle all types of fibrous material to meet the following requirements:

- A high degree of reliability
- Long operational life between overhauls
- Minimum fall-off in performance between overhauls
- Minimum down-time during maintenance
- Materials of construction selected to give maximum resistance to corrosion and erosion.

FIBROGLIDE 'SPM' TYPE SECTIONAL DRAWING



DESCRIPTION

The Fibroglide pump is designed with back pull-out facility to provide the user with easy and quick access to pump internals for inspection or overhaul purposes. By withdrawing the spacer coupling, removing the bearing bracket retaining nuts and any external clean water connections, the bearing bracket and complete rotor can be pulled out to the rear without disturbing the main pipework or the connections to the pump branches.

The bearing bracket and rotor are inter- changeable between pumps of the same frame size. Each pump frame size is available in alternative materials of construction, details of which are given overleaf

The unit is designed to be direct driven through a spacer coupling but belt drive facilities are also available through an alternate driving end bearing arrangement.

Features

CASING - The pump casing consists of a single casting incorporating a horizontal axial suction branch, a vertical discharge branch on the pump centreline and support feet. Both branches are provided with flanges to accept mating pipework flanged and drilled to BS.4504, BS. 10, DIN or ASA standards. The suction branch incorporates a handhole to provide access to the pump inlet and tapped pressure gauge connecting points are available on both suction and discharge flanges.

A casing renewable plate is fitted on the suction side and axial adjustment of the rotor is provided in the driving end bearing housing.

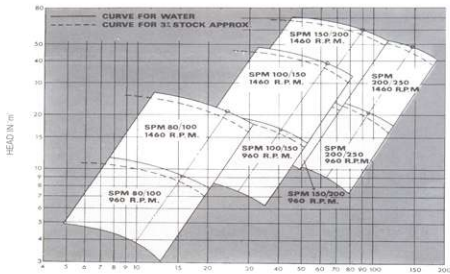
IMPELLER - The impeller is of semi - open type with passages and vane contours specifically designed to handle paper stock and to prevent wedging between the impeller and the wearing plate. On the rear of impeller shroud are backblades, which provide a centrifugal action to assist in clearing the stock at the gland area.

STUFFING BOX - The stuffing box is manufactured from a single casting machined on the outer diameter to fit a spigot in the rear of the casing, thus ensuring that the component is located concentrically. A tapping is provided so that a clean water supply can be fed to the stuffing box to lubricate the packing and prevent stock entering from the casing. The stuffing box is designed to permit the use of a mechanical seal, should the user so desire. Most of the mechanical seals in common use can be fitted to the pump.

SHAFT - The shaft is manufactured from stainless steel and is designed to provide the necessary rigidity through the stuffing box to the impeller. A sleeve can be provided on the shaft in the stuffing box area. Positive location of the bearings and axial location of the rotor is provided by shoulders and double lock nuts.

BEARINGS - The inboard end of the pump has a roller journal bearing. At the driving end there is a double row angular contact combined thrust and journal bearing. Bearings are normally grease lubricated but the bearing housing is designed to provide oil lubrication as an alternative.

BEARING BRACKET - The bearing bracket is manufactured from cast iron to BS.1452, spigotted at the non-drive end to locate it concentrically with the casing and stuffing box, and is designed to provide a high degree of rigidity for the bearing and rotor assembly. An additional detachable support bracket is provided at the driving end. Effective bearing sealing is provided by the use of lip type seals backed up by a 'V' ring seal at the gland end.

DIRECTION OF ROTATION - Clockwise when viewed from drive end.

WATER RATING CHART 'SPM' TYPE