



SCANPUMP CANTILEVER PUMPS FV.

COST-EFFECTIVE CANTILEVER PUMPS

Cantilever design means high reliability

Conventionally sump pumps have bearings and shaft seal in the pumped liquid - often the cause of breakdowns. The FV pumps have the bearings above the mounting plate - clear at all times of the sump liquid - and the shaft seal is replaced by a restricted annular volume around the shaft sleeve.

When properly installed, a Cantilever pump will operate for many years without maintenance or repair shut-downs. This is the basis for cost-effective pumping.

Clogless

Vortex impellers are used, permitting easy passage of large solids through the pumps without risk of blockage.

Low power consumption

Efficiencies of the FV pumps are higher than for other vortex pumps, due to the new impeller design. The result is lower operating costs.

Maintenance = lubrication only

The only maintenance needed is bearing lubrication. Pump casings, impellers, bearings and impeller fittings are part of the Scanpump Modular System. Stocks of replacement parts are therefore minimized.

For highly aggressive liquids

The pumps are available in corrosion resistant alloys and the shaft is then protected by a sealed sleeve over its entire length.

Wide range of applications

Hot and waste liquids of all kinds. Environmentally harmful liquids. Sludges, slurries and liquids containing large or long solids.



DESIGN

These pumps fulfill the applicable quality requirements in ISO 5199.

Pump Casing

Casing and casing covers are the same as used in Series FB - our horizontal clogless pumps.

The pump casing is fixed to the support tube, which is suspended from the bearing bracket, the latter being supported by the mounting plate.

The vortex impeller ensures a clear flow-path through the casing for solids.

No shaft seal is required behind the impeller, but leakage along the shaft at this position is limited by a "throttling" volume between the shaft sleeve and a bush fitted in the casing cover.

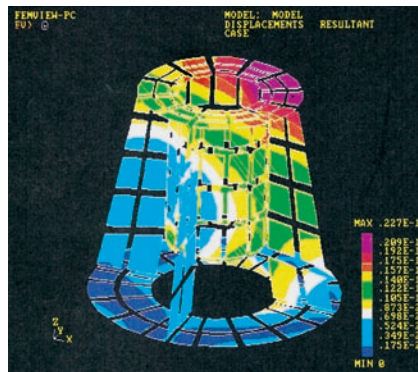
Impeller

As with the casings and covers, the vortex impellers are those used in FB-Series pumps. They are of semi-open design, eliminating all clogging risks, and have backvanes to reduce axial thrust.

Shaft and Bearings

There are three bearings in the rigid bearing arrangement - above the mounting plate. Because none of the bearings are in the liquid and there is no shaft seal, the primary causes of operational failures in submerged cantilever pumps have been eliminated.

The bearing assembly contains a pair of opposed angular contact ball bearings and a roller bearing. Grease lubrication is used and the bearings are protected by an effective sealing arrangement. B10 bearing life exceeds 40,000 hours - equivalent to 5 years continuous service - calculated for the extreme recommended duty, i.e. liquid S.G 1.8 and pump speed 1800 r/min.



The finite element method has been used to check that the adequate rigidity has been achieved in the design.

Construction Materials

Material Code	03	24
Pump casing	Cast iron 0120	Stainless Steel 2324
Impeller	Stainless Steel 2324*	Stainless Steel 2324
Shaft	Steel 2172	Stainless Steel 2321
Shaft End Sleeve	Stainless Steel 2324	Stainless Steel 2324

*) FV 100/100-32 and larger sizes are also available with impeller of cast iron 0120.

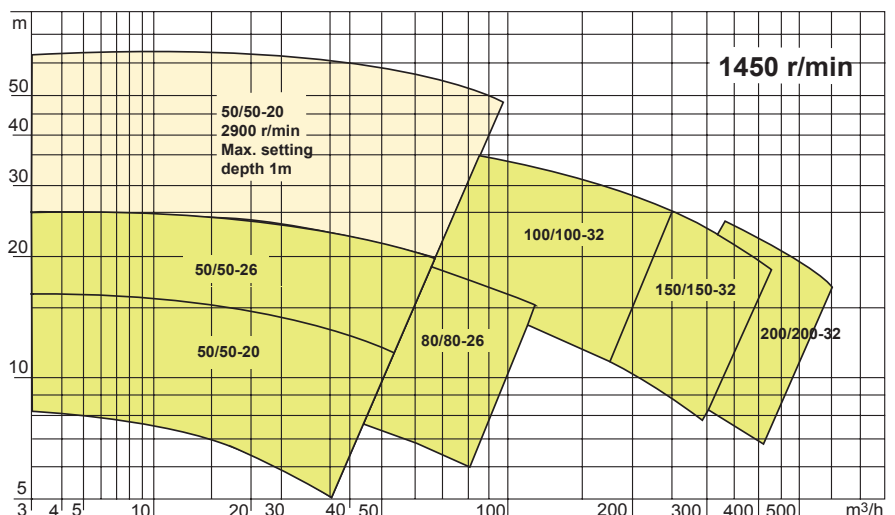
The table shows the standard material codes. In addition, the pumps can also be delivered in other materials upon request to Scanpump.

For the more specialised material constructions, a sleeved steel shaft design is used, the sealed sleeve being of the same material as the pump casing and impeller. All wetted parts are therefore of the same high quality corrosion resistant material.

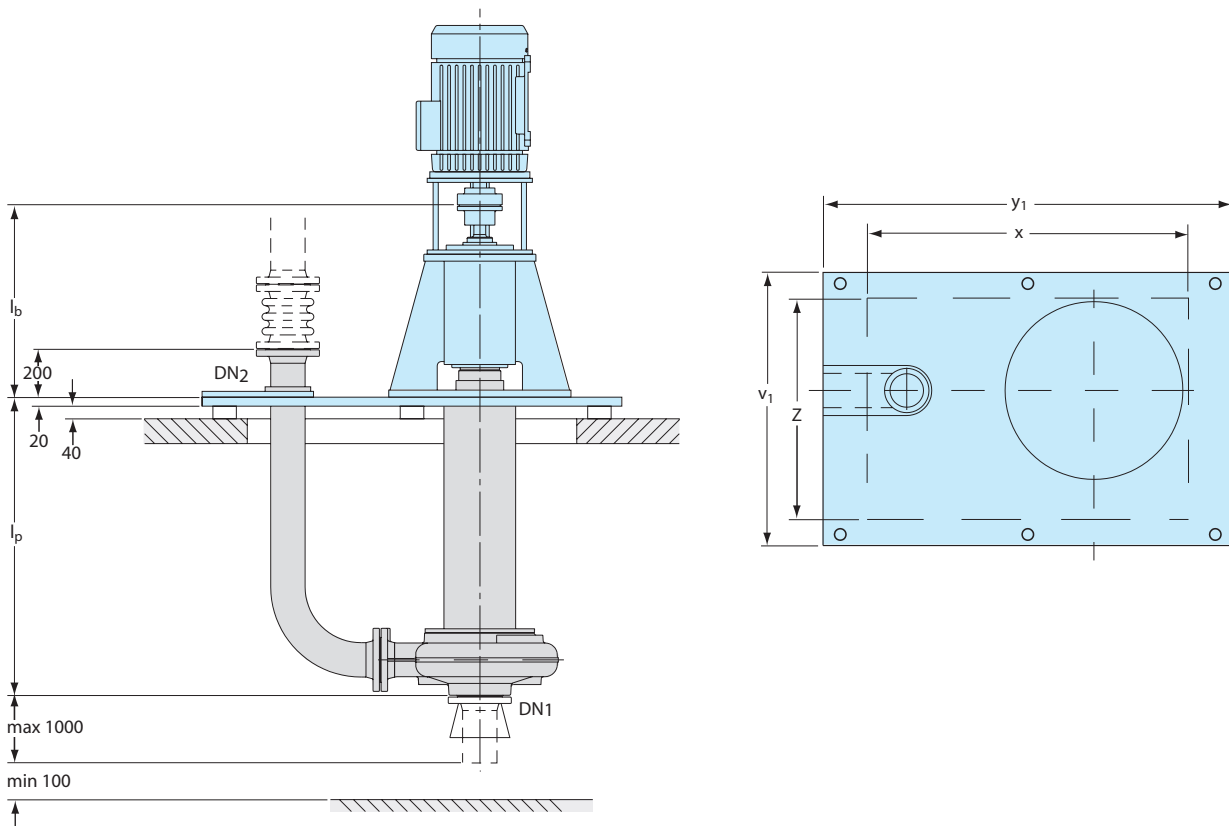
Technical Data

Capacity	3-600 m ³ /h
Head	5-65 m
Temperature	Max. 220°C
Flange	ISO 7005 PN 10
Lubrication	Grease
Setting depth	Max. 2* m

*) Can be increased by 1 m by fitting an extension pipe to the inlet.



DIMENSIONS



Type	DN _{1,2}	l _b	l _p			v ₁	x	y ₁	z
			alt. 1	alt.2	alt.3				
FV 50/50-20	50	580	1133*	1633*	2133*	540	650	750	420
FV 50/50-26	50	580	1133*	1633*	2133*	570	800	900	470
FV 80/80-26	80	580	1153*	1653*	2153*	570	800	900	470
FV 100/100-32	100	709	1130*	1630*	2130*	700	1020	1120	600
FV 150/150-32	150	709	985	1485	1985	760	1120	1220	660
FV 200/200-32	200	709	1020	1520	2020	750	1280	1380	650

*) The height of an inlet funnel, 150 mm, is included in the dimension.

Head office

Sweden
Scanpump AB
Tel. +46 31 83 63 00
Fax +46 31 16 79 14
info@scanpump.com
www.scanpump.com

Subsidiaries

Denmark
Scanpump A/S
Tel. +45 48 17 11 10
Fax +45 48 17 19 11
info@scanpump.com
www.scanpump.com

France
Scanpump AB
Tel. +33 4 72 31 00 06
Fax +33 4 78 05 57 74
info@scanpump.com
www.scanpump.com

Germany
Scanpump AB
Tel. +49 6257 9317 0
Fax +49 6257 9317 99
info@scanpump.com
www.scanpump.com

Great Britain
Scanpump AB
Tel. +44 1293 744 836
Fax +44 1293 543 392
info@scanpump.com
www.scanpump.com

The Netherlands
Scanpump AB
Tel. +31 651 08 21 25
Fax +31 523 27 04 71
info@scanpump.com
www.scanpump.com

Subsidiaries, ABS Group

Austria
Tel. +43 2236 642 61
Fax +43 2236 642 66
www.absgroup.com

Finland
Tel. +358 7 5324 0300
Fax +358 9 55 80 53
www.absgroup.com

Norway
Tel. +47 67 55 47 00
Fax +47 67 55 47 50
www.absgroup.com

Asia Pacific
Singapore
Tel. +65 6463 3933
Fax +65 6462 2122
www.absgroup.com

China
Tel. +86 21 68882900
Fax +86 21 58826708
www.absgroup.com

South and North America
Brazil
Tel. +55 41 2108-8100
Fax +55 41 3348 1879
www.absgroup.com

USA
Tel. +1 203 238 2700
Fax +1 203 238 0738
www.absgroup.com

scanpump