



DAYLIFF ADVANCED PUMP SIZING TOOL

USER GUIDE

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1. How to Access Dayliff Select

- Open your preferred web browser.
- Paste the URL <http://dayliff.pump-flo.com>

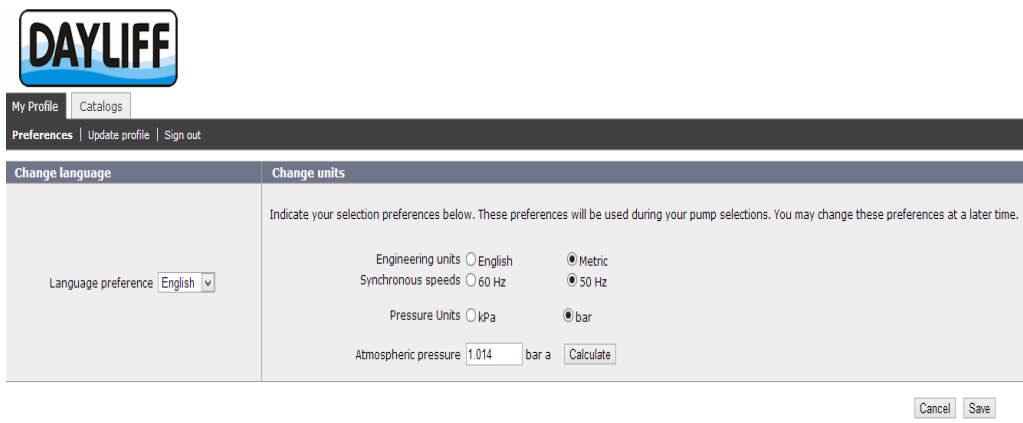
2. Creating a profile

- Enter your email address and language of your choice. Click on “Sign In”.



The screenshot shows the Dayliff logo at the top. Below it is the heading "Create Profile or Sign In". A welcome message states: "Welcome to the Internet's Premier pump selection service. In order to use this service you must create an ePUMP-FLO profile. An ePUMP-FLO profile can be used with any ePUMP-FLO pump selection application. Registration for this profile is free." Below this, instructions read: "Enter your email address below. If you have not created an ePUMP-FLO profile, you will be prompted to enter information required to create the profile. If you have already created a profile, you will be redirected to resource you requested." A form titled "Enter your email address" contains the instruction "Please enter your email address and click on the Sign In button to continue." The form has two fields: "Email address" with a text input box, and "Language preference" with a dropdown menu set to "English". A "Sign In" button is located at the bottom of the form.

- Create a profile and save your settings. Preferred units are “metric”, speed “50Hz” and pressure units “bar”.



The screenshot shows the Dayliff logo at the top. Below it is a navigation bar with "My Profile" and "Catalogs" tabs. Under "My Profile", there are links for "Preferences", "Update profile", and "Sign out". The main content area is split into two sections: "Change language" and "Change units". The "Change language" section has a "Language preference" dropdown menu set to "English". The "Change units" section has the instruction: "Indicate your selection preferences below. These preferences will be used during your pump selections. You may change these preferences at a later time." It contains several radio button options: "Engineering units" with "English" selected and "Metric" selected; "Synchronous speeds" with "60 Hz" selected and "50 Hz" selected; "Pressure Units" with "kPa" selected and "bar" selected. There is also a field for "Atmospheric pressure" set to "1,014" bar a, with a "Calculate" button next to it. At the bottom right of the form are "Cancel" and "Save" buttons.

3. Pump Selection

- Once your settings are saved, you will be re-directed to the “Catalogs” page.
- For automatic pump selection, click on “Start Pump Selection”. Manual pump selection is discussed later in this user guide.

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My Profile Catalogs

Pump Selection Please click on the following button to begin your pump selection.


Start Pump Selection

Product

Davis & Shirliff regionally distributes high quality equipment from a number of industry leading companies from around the world as well as carrying out manufacture and assembly of various water related products. The company is Kenyan based and operates through a network of Kenyan branches as well as regional subsidiaries in Uganda, Tanzania, Zambia, Rwanda and Ethiopia. The Dayliff pumps include End Suction Centrifugal Pumps, Borehole Pumps, Domestic Pumps, Drainage Pumps, Engine Pumps, Horizontal Centrifugal Pumps, and Vertical Multistage Centrifugal Pumps.

Dayliff Domestic Pumps

The Dayliff range of domestic pumps are robust and compact pumps specifically designed and selected for small scale domestic and commercial water supply. The range incorporates peripheral pumps, automatic pressure controlled pumps, jet type pumps, self-priming pumps, well pumps and pumps suitable for drainage or industrial applications where slightly corrosive liquids are to be pumped.



- Once on the sizing interface, input your calculated total dynamic head (TDH) and desired flow (e.g. submersible pump giving 10m³/Hr at 70m head). “BEP” stands for Best Efficiency Point and Near Miss defines the window within which the system should search for the closest pump that matches the given design point.

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My Profile Catalogs Manual Selection Design Point Search

Primary Criteria | Advanced Criteria | Total Head Calculator

Rated Design Point (Change Units)

Flow rate * 10 m³/hr

Total head * 70 m

Generate SRC

BEP no preference

Near miss 0 % of head

Types & Speeds

Pump types

- Borehole Pumps
- Domestic Pumps
- Drainage Pumps
- End Suction
- Engine Pumps
- Horiz. Multistage
- Pool Pumps

Select All

Speeds

- Adjustable
- 3000
- 1500

Select All

[Range charts, type notes, and other product information](#)

Fluid & NPSH

- Select pump type and speed. Click “Search”

Note: For surface pumps working on a negative suction, NPSHa can be calculated.

Calculate NPSHa

Atmospheric pressure bar a

Fluid vapor pressure * bar a

Tank surface pressure * bar g

Suction elevation head * m

Piping friction loss (tank to pump) * m

4. How to Print Reports

- Pick the pump that best fits your design parameters. Options given are rated in order of highest to lowest efficiency at the given flow rate and TDH



My Profile Catalogs Manual Selection Design Point Search Search Results

Selection List

The following pumps meet your primary search criteria. Pumps that are flagged do not meet your optional criteria. Refer to pump warnings on the 'Pump Curve' page for more information about criteria that flagged pumps do not meet.

Click on the pump row to select a pump. Click on a column header to sort the list.

Design Point: 10 m³/hr, 70 m.

Preview	Type	Size	Curve	Speed (rpm)	Dia	Head (m)	Eff (%)	BEP (%)	NPSHr (m)	Power (kW)	Motor (kW)	Frame	Min flow (m ³ /hr)	Impeller
	Borehole Pumps	DS 17	...	2900	DS 17/7	70	62.2	73	...	3.02	...	...	...	...
	Borehole Pumps	DS 14	...	2900	DS 14/13	73.3	60	60.8	...	3.32	...	...	...	...
	Borehole Pumps	DSP 8	...	2900	DSP 8-23	88	57.3	61.4	...	4.17	...	...	...	...
	Borehole Pumps	DS 8	...	2900	DS 8/30	91.3	47.6	57.5	...	5.19	...	...	...	...

- Once you select your pump, the following interface will follow, giving the pump parameters.

Flow	Head	Eff	BEP	NPSHr	Power	Motor	Frame	Min flow	Sphere
10 m³/hr	70 m	62.2 %	73 %	---	3.02 kW	---	---	---	---

- It is possible to customize your display options and choose the number of pumps in your design.
- Click on the “print reports tab” for the pump curve and datasheet. These can be attached to your quotations or tenders.

5. How to do a Cost Analysis

- Click on the “Cost Analysis” tab
- Input requested parameters (costs, running hours, flows) . Money values used are based on USD.
- Go back to “Printed Reports” and print the cost analysis. This can also be attached to your quotations or tenders.

My Profile | Catalogs | Manual Selection | Design Point Search | Search Results | Selected Pump

Pump Curve | Design Notes | **Cost Analysis** | Printed Reports

Energy Cost

Motor
not selected

Fixed speed NOTE: Variable speed cost analysis requires resistance curve to be entered.
 Variable speed (VFD)

Operating Load

Flow m ³ /hr	Hours / yr	Cost / kWh	Motor / Drive % Eff	Pump speed	Pump kW	Resistance curve
						Primary
						Primary
						Primary
						Primary
						Primary

Resistance Curves

Select curve/points

Primary
Secondary 1
Secondary 2
Secondary 3
Secondary 4

Resistance curve
 Operating points

Flow m ³ /hr	Head m
0	0
10	70

Calculate Hours remaining 8760 kWh 0 Cost \$0

Life Cycle Cost

Initial Costs

Initial investment

Installation and commissioning

Decommissioning Costs

Decommissioning and disposal

Other Costs

Annual Costs

Maintenance and repair

Operating cost (labor)

Downtime

Other Costs

6. Importance of Design Notes

- Click on “Design Notes”
- It gives you information on the exact operating point of your pump.

My Profile | Catalogs | Manual Selection | Design Point Search | Search Results | Selected Pump

Pump Curve | **Design Notes** | Cost Analysis | Printed Reports

Curve Data

Size DS 17

Design Curve

Shutoff head 76.5 m

Shutoff dP 7.5 bar

Minimum flow

Best efficiency 73% @ 14.1 m³/hr

NOL power 3.56 kW @ 20.6 m³/hr

Max Curve Data

Max curve DS 17/27

Max power 14.3 kW @ 20.6 m³/hr

Manufacturer's Pump Note

Pump Warnings

Pump Catalog Data

Pump Limits

Temperature

Pressure

Eye area

Sphere

Power

Pump Speeds

Test speed 2900 rpm

Min speed 2900 rpm

Max speed 3000 rpm

Specific Speeds

Pump

Suction

Vertical Turbine

Max lateral

Bowl size

Thrust K factor

7. Manual Pump Selection

- For manual pump selection ,click on “Catalogs” then “manual selection”
- Click “Total Head Calculator” and choose the type of system you wish to design.
- Input requested parameters.



My Profile | Catalogs | Manual Selection | Design Point Search

Primary Criteria | Advanced Criteria | **Total Head Calculator**

Click on the image representing your system.

