



Wastewater Sizing Guide

Introduction to Wastewater Sizing

User-friendly sizing tool

WinCAPS means **W**indows-based **C**omputer **A**ided **P**roduct **S**election. The software has been developed over a period of years to provide the high standards of reliability and user-friendliness seen today.

WebCAPS is the Internet version of WinCAPS and contains most of the features found in WinCAPS.

Why use the Grundfos CAPS sizing tool?

Simply because it makes pump sizing and pump system optimization easier than ever before. And you get greater reliability, more information, and more documentation with minimal effort.

You no longer need to look for data sheets and curves to size a pump. Instead, you simply enter your requirements into the software and let WinCAPS handle all the sizing calculations. The software ensures entirely reliable calculations. And there is less risk of overlooking relevant pump solutions.

WinCAPS provides you with useful documentation detailing the pump selected and the sizing calculations used to select it.

WinCAPS can also calculate **Life Cycle Costs** - meaning the total cost of owning a certain pump. Prints of these calculations can be used to compare different pump solutions and may be very useful when you are going to decide either to replace an old pump or select a pump for a new installation.

Getting started

Installing WinCAPS is perfectly simple: Insert the CD-ROM and follow the instructions on the screen. Any previous version of WinCAPS installed on your computer will not be overwritten. If you want to remove it, use the uninstall function in Windows.

Depending on which features and files you want to install, WinCAPS requires between 300 and 650 megabytes of available space on your hard drive.

You can access WebCAPS from the Grundfos website at www.grundfos.com and click on the WebCAPS link.

Wastewater sizing in brief

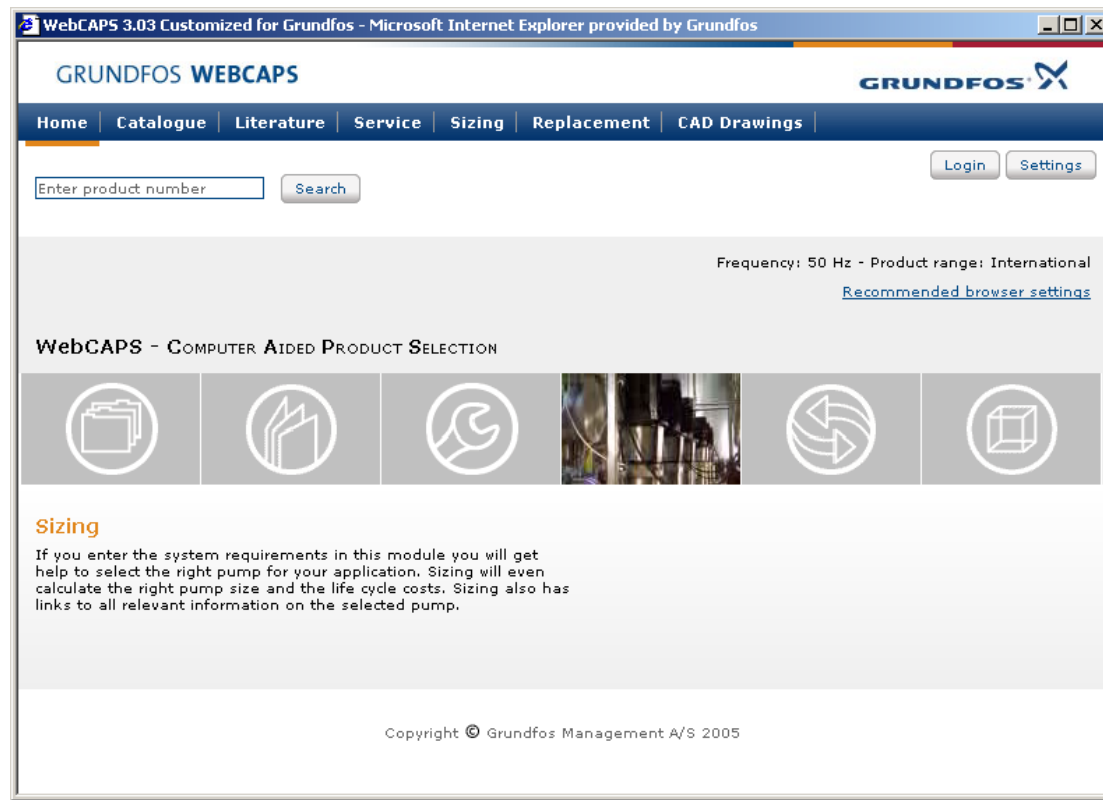
Pump sizing in WinCAPS consists of three overall steps:

1. Enter your *input* in a number of steps.
2. The sizing tool performs its calculations.
3. Receive the *output* in a list of relevant pump solutions and a detailed description of the recommended system solution.
Documentation describing the selected pump solution and the sizing calculation is available as printouts.

Wastewater Sizing Guide

Introducing the sizing wizard

WinCAPS 7.60 and WebCAPS 3.00 feature a completely new and user-friendly approach to pump sizing. In the WebCAPS front page, click Sizing or the sizing icon.



Step – Select Application

Click Wastewater and the program will guide you through a set of questions step by step ensuring that you get the right product recommendation when sizing for Grundfos wastewater products.



When the program has enough information to present you with a sizing recommendation, the Start sizing button will be active. But it will still be possible for you to narrow down the options/hit list even further. Throughout the wizard you can “jump” between the different steps making it easy to go back to make changes to the input entered earlier.

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Step – Select Application area

Select application area: Commercial buildings, Domestic buildings or Municipal wastewater. The further questions in the sizing wizard will be based on this selection and adapted to the selected application area and also narrowed down to the suitable pump ranges and pump types.



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Select sub-application

Each application area includes a number of sub-applications indicated by the dotted boxes on the screen. Point the mouse to one of the dotted boxes for a second to see a small description of the sub-application. Select a sub-application and you can further narrow down the field of possible pump types based on default values of minimum free passage and usability within the selected sub-application.



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Select type of installation

Select type of installation by either clicking once on one of the illustrations and then clicking the Next button or simply by double-clicking on the illustration of the preferred type of installation. For all wastewater sub-applications the main selection is between submerged or dry-installed pumps.



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Configuration

Specify how many pumps and standby pumps you need to get the required flow. Please note that if more than one pump is required, the result of the sizing calculation will contain pumps of the same type. However, in some sub-applications in the municipal wastewater application area you can choose to add a larger standby pump.

The screenshot shows the Grundfos WebCAPS 3.03 interface in a Microsoft Internet Explorer browser window. The title bar reads "WebCAPS 3.03 Customized for Grundfos - Microsoft Internet Explorer provided by Grundfos". The main header includes the "GRUNDFOS WEBCAPS" logo and a navigation menu with links: Home, Catalogue, Literature, Service, Sizing (highlighted), Replacement, and CAD Drawings. There are "Login" and "Settings" buttons on the right. The left sidebar shows a breadcrumb trail: "Wastewater | Commercial buildings | Sewage". Below this, it displays "Number of pumps: 2" and "Of these: number of standby pumps: 0". An illustration of a pump installation in a trench is shown. The main content area is titled "Configuration" and contains three settings: "Number of pumps" set to 2, "Of these: number of standby pumps" set to 0, and "Continuous Operation" with an unchecked checkbox. At the bottom, there are icons for file operations, a "Print /PDF" button, and a progress indicator "Step 3 of 12". Navigation buttons include "<<", "< Back", "Next >", and "Start sizing".

Number of pumps:

Select how many pumps of the same size you want. In some sub-applications in the municipal wastewater application area you can even size a standby pump (bigger pump for heavy rains, flooding, etc.)

Of these: number of standby pumps:

Select how many standby pumps you want. Number of pumps minus number of standby pumps = number of pumps required to reach the specified flow. In later steps you can see the flow velocity and the performance curves for 1 pump, 2 pumps.... or all pumps in operation.

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Select type of Hydraulic design, Material and Motor

Depending on the application area and sub-application selected, the wizard contains steps for the selection of hydraulic design, materials and motor.

At each step, select your preferences. This further narrows the range of available pumps.



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Your requirements

Enter your required flow and head values (discharge flow and geodetic head). CAPS now has all the information needed to present you with a list of pumps matching your requirements.

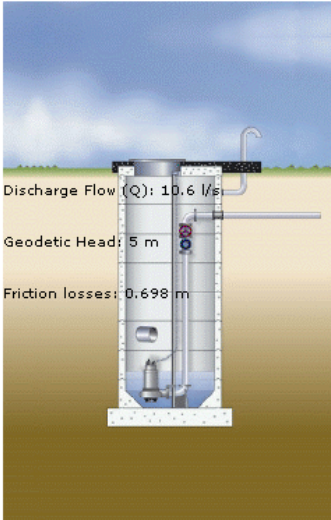
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Wastewater | Commercial buildings | Sewage



Discharge Flow (Q): 10.6 l/s

Geodetic Head: 5 m

Pipe friction losses: 0.698

Allowed undersize: 0 %

Allowed flow oversize: 30 %

Media Temp. <= 40 ? ☒

Discharge flow:
Discharge flow is defined as the flow to be delivered by the system. If the calculator for assumed inlet flow is used, CAPS automatically adds a safety factor of 15% when converting this into discharge flow.

Geodetic head:
Geodetic head is the actual physical difference in height between the average liquid level in the pit and the highest point of the discharge pipe (or average water level in the receiving vessel).

Friction losses:
Friction losses are defined as loss of pressure in the pipeline as well as from the various fittings in the pipeline. Different calculators for both friction losses and flow velocity in all possible situations are available.

Allowed undersize:
A flow rate x% below the required is accepted

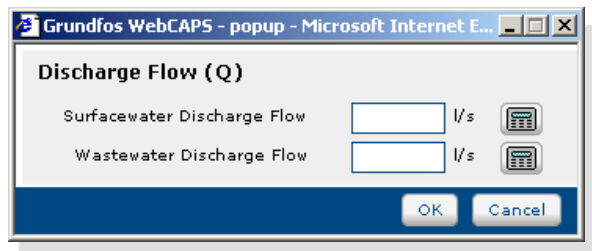
Print / PDF Step 5 of 12 << < Back Next > Start sizing

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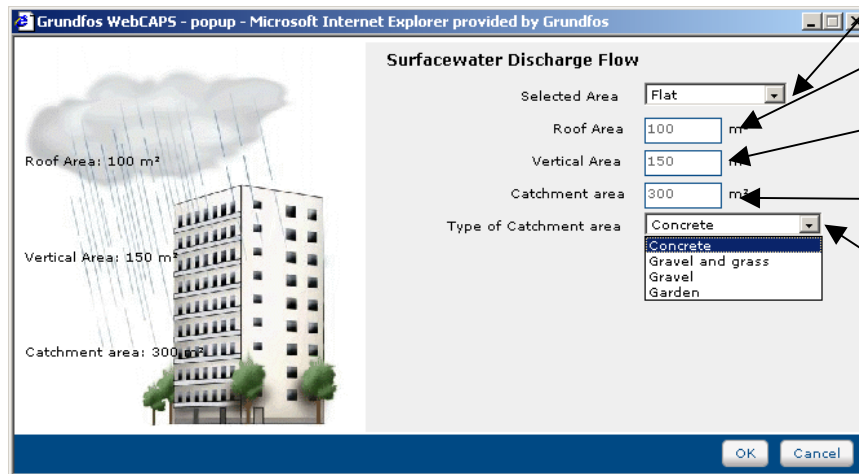
The wastewater sizing wizard offers a number of calculators to provide you with a guideline for the possible discharge flow and pipe friction losses.

Calculating the discharge flow

To calculate the discharge flow, click on the calculator next to the discharge flow input field. When opening the calculator for estimated inlet flow you get the option of calculating different kinds of inlet flow. In commercial buildings, sewage sub-application you will see two calculators, one for surface water discharge flow and one for wastewater discharge flow.



The surface water discharge flow calculator requires a number of inputs:



Selected area:
Based on the risk of damage by heavy rain you can select either a *flat* or a *mountainous* type of area.
Rated rainwater intensity is
Flat = 0.014 l/s/m²
Mountainous = 0.023 l/s/m².

Roof area:
The horizontal projection of the roof area.

Vertical area:
Vertical surfaces are exposed to heavy showers. Vertical surfaces are typically walls pointing towards the prevailing wind direction.

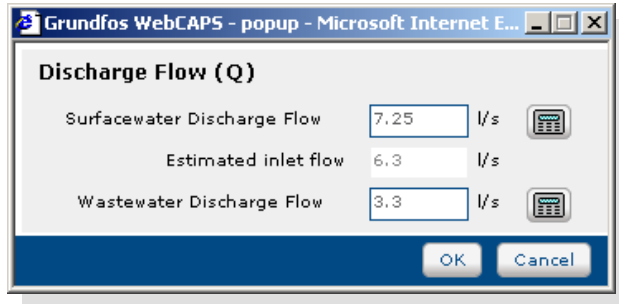
Catchment area:
The horizontal projection of the catchment area.

Type of catchment area:
The quantity of rainwater that will reach the pit or collecting tank depends on the type of catchment area:

Concrete:	Discharge coefficient: 1.0
Gravel and grass:	Discharge coefficient: 0.8
Gravel:	Discharge coefficient: 0.6
Garden:	Discharge coefficient: 0.1

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Click OK and the calculator returns both an inlet flow and a discharge flow value incorporating a calculated safety margin of 15%.



Grundfos WebCAPS - popup - Microsoft Internet Explorer

Discharge Flow (Q)

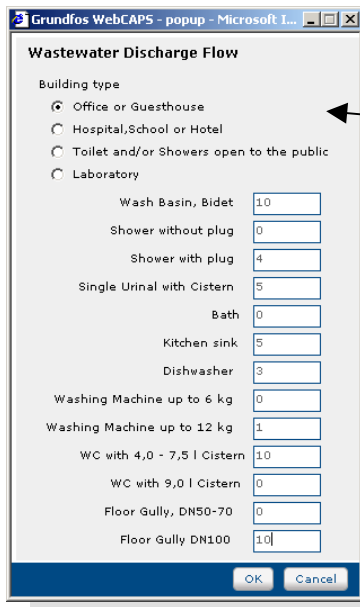
Surfacewater Discharge Flow 7.25 l/s

Estimated inlet flow 6.3 l/s

Wastewater Discharge Flow 3.3 l/s

OK Cancel

The wastewater discharge flow calculator enables you to estimate the wastewater flow according to the EN 12056-2 standard. All you have to do is define the type of building and enter the number of draw-off points:



Grundfos WebCAPS - popup - Microsoft Internet Explorer

Wastewater Discharge Flow

Building type

☒ Office or Guesthouse

☐ Hospital, School or Hotel

☐ Toilet and/or Showers open to the public

☐ Laboratory

Wash Basin, Bidet 10

Shower without plug 0

Shower with plug 4

Single Urinal with Cistern 5

Bath 0

Kitchen sink 5

Dishwasher 3

Washing Machine up to 6 kg 0

Washing Machine up to 12 kg 1

WC with 4,0 - 7,5 l Cistern 10

WC with 9,0 l Cistern 0

Floor Gully, DN50-70 0

Floor Gully DN100 10

OK Cancel

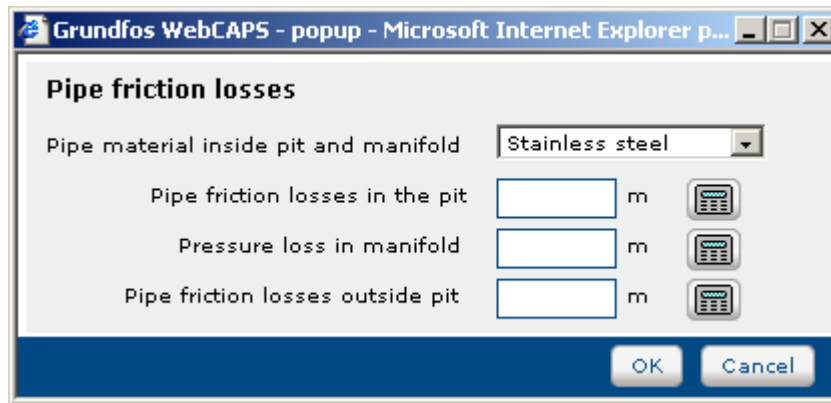
Typical frequency factors associated with different applications:

Office or guesthouse: Frequency factor K=0.5 for intermittent usage
Hospital, school or hotel: Frequency factor K=0.7 for frequent usage
Toilet and/or showers open to public: Frequency factor K=1.0 for heavy usage
Laboratory: Frequency factor K=1.2 for special usage

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Calculating the pipe friction losses

Click on the calculator to the right of the pipe friction losses input field.



The screenshot shows a web browser window titled "Grundfos WebCAPS - popup - Microsoft Internet Explorer p...". Inside the window is a form titled "Pipe friction losses". The form has the following fields and controls:

- "Pipe material inside pit and manifold" with a dropdown menu currently set to "Stainless steel".
- "Pipe friction losses in the pit" with a text input field followed by "m" and a calculator icon.
- "Pressure loss in manifold" with a text input field followed by "m" and a calculator icon.
- "Pipe friction losses outside pit" with a text input field followed by "m" and a calculator icon.
- At the bottom, there are "OK" and "Cancel" buttons.

The calculation of friction losses consists of three calculations: Pipe friction losses in the pit, in the manifold and outside the pit.

The first step is to select the pipe material used in the pit and for the manifold. Click the drop-down button and select your pipe material.

Wastewater Sizing Guide

Pipe friction losses in the pit calculator

To calculate the pipe friction losses in the pit, enter the data for the pipe system inside the pit.

At the bottom of the window you will get a recommended (pipe) diameter based on the recommended flow velocity.
If there is a pipe with a different diameter inside the pit you can add this in line B.
The roughness of the pipe is based on your selection of pipe material.

Grundfos WebCAPS - popup - Microsoft Internet Explorer provided by Grundfos

Pressure loss from Valves, bends and transitions for each single pump (in the pit)

Isolating Valve	1
Non-return valve ball type	1
Non-return valve flap type	0
Autocoupling	1
Bend 45	0
Bend 90	3
Conical narrowing	0
Rounded narrowing	0
Standard narrowing	0
Widening, 5°	0
Widening, 10°	0
Widening, 15°	0
Standard widening	0
Eccentric reducer	0
Additional Zeta values	0

Zeta 3,3

OK Cancel

Grundfos WebCAPS - popup - Microsoft Internet Explorer provided by Grundfos

Pipe friction losses in the pit

Pipe	Pipe length	Pipe size	Roughness	Velocity	Zeta	Friction losses
A	6 m	DN 125 (125 mm)	0,25 mm	0,43 m/s	3,3	0,043 m
B	0 m		0,25 mm			

Pipe material: Stainless steel

Discharge Flow (Q): 5,3 l/s

Recommended diameter ($v > 1$ m/s): 82,1 mm

Total friction losses: 0,043 m

OK Cancel

To calculate losses incurred from single resistances, please use the calculator in the Zeta column.

Enter the number of single-resistance losses in your pipe system inside the pit in this window:

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Pressure loss in manifold calculator

To calculate the pressure loss in the manifold, select diameter DN, connection type and expansion. Minimum and maximum liquid velocity (v min and v max) will appear as you select the various connections. The calculated pressure loss in the manifold will appear at the bottom of the window.

Grundfos WebCAPS - popup - Microsoft Internet Explorer provided by Grundfos

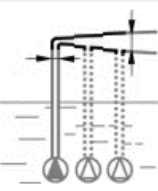
Pressure loss in manifold

pump	DNi[mm]	Connection	Cross expansion	v min	v max
1	DN 125 (125 mm)	Bend 90	None	0.43 m/s	0.43 m/s
2	DN 125 (125 mm)	lateral Y-branch, confluence		0.43 m/s	0.86 m/s

Pipe material: Stainless steel

Pressure loss in manifold: 0.006 m

OK Cancel



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Pipe friction losses outside the pit calculator

To calculate the pipe friction losses outside the pit, enter the data for the pipe system outside the pit.

The screenshot shows a web-based calculator window titled "Grundfos WebCAPS - popup - Microsoft Internet Explorer provided by Grundfos". The main heading is "Pipe friction losses outside pit".

Pipe	Pipe length	Pipe material	Pipe size	Roughness	Velocity	Zeta	Friction losses
1	100 m	PEM/PEH PN10	DN 140 (114.6 mm)	0.25 mm	0.51 m/s	3.75	0.355 m
2	50 m	PEM/PEH PN10	DN 160 (130.6 mm)	0.25 mm	0.4 m/s	3.75	0.108 m
3	100 m	PEM/PEH PN10	DN 160 (130.6 mm)	0.25 mm	0.4 m/s	3.75	0.186 m
4	0 m	PEM/PEH PN10		0.25 mm			
5	0 m	PEM/PEH PN10		0.25 mm			
6	0 m	PEM/PEH PN10		0.25 mm			
7	0 m	PEM/PEH PN10		0.25 mm			

Number of pumps in operation: 1

Discharge Flow (Q): 5.3 l/s

Recommended diameter ($v > 0.7$ m/s): 98.2 mm

Total friction losses: 0.649 m

Buttons: OK, Cancel

Enter the pipe length, select pipe material and pipe size. At the bottom of the window you even get a suggestion for a recommended pipe diameter based on the calculation of the flow velocity. Similarly to the pipe-friction-losses-in-the-pit calculator, you can calculate the losses from single resistances in your system outside the pit by using the calculator in the Zeta column. If you want to change the pipe diameter, just add a pipe 2, 3, 4, 5, 6 or 7 and enter the characteristics of that particular pipe. You can check the flow velocity in the pipe for 1 to 6 pumps in operation by selecting the number of pumps in operation. When all the calculations are made, go back to the Your requirements-window. The Start sizing-button will now be active, and you can go straight to the sizing result by clicking this button.

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Power supply and life cycle cost settings

Enter the data for your power supply in order to narrow down the number of recommendations.

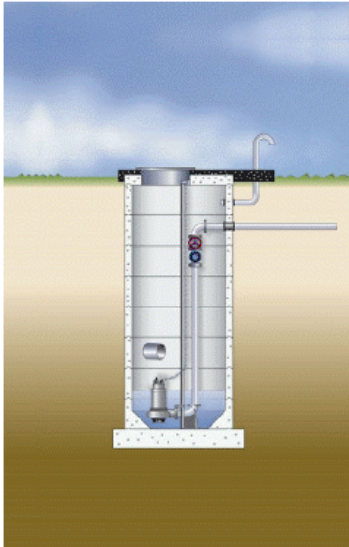
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Power supply and Life Cycle Cost settings

Frequency	50	Hz
Phase	1 or 3	
Voltage	1 x 230 or 3 x 400	V
Energy price	0.1	EUR/kWh Edit
Calculation period	15	years
Pump operating time	1000	h/a

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If you wish to make a calculation of life cycle costs, enter the basic data concerning energy price, calculation period and the pumps operating hours.

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Hit list settings

Here you can choose a specific pump to be included in the hit list. If you do so you can compare an evaluation of the system using this pump against the best hit.

Here you also select evaluation criterion for your hit list.

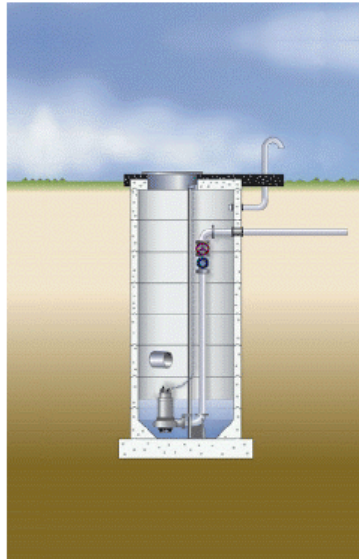
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Hit list settings

Include particular pump in hit list 

Evaluation criterion Price + energy costs

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Grundfos recommends

Here is the result of the sizing wizard's calculations

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Input overview:

Select Type of Installation

Submersible pump with autocoupling system

Configuration

Number of pumps 2
Of these: number of standby pumps 0
Continuous Operation No

Select Type of Hydraulic

Semi-open Impeller Yes
Vortex Impeller Yes
Channel impeller Yes
Grinder Yes

Your Requirements

Discharge Flow (Q) 10.6 l/s
Geodetic Head 5 m
Pipes friction losses 0.698 m

Grundfos recommends:

2 SE1.80.80.15.4.50D
Product number: 96047533, Price: On request
Total: On request

SE1.80.80.15.4.50D
Highly advanced pumps with many unique features
The Grundfos SEV and SE1 ranges are technologically very advanced pumps designed for handling wastewater, process water and unscreened raw sewage in heavy-duty municipal utilities and industrial applications.
These heavy-duty pumps are built for years of trouble-free operation in the most demanding applications.
The pumps may be installed submerged or dry without motor cooling; in either case they are extremely reliable and very easy to service.
The efficient single-channel or SuperVortex impellers provide free passage of solids up to 100 mm. This greatly reduces the risk of logging and ensures maximum up-time and reduced operating costs.
Advanced technology inside out
The Grundfos SEV and SE1 pumps feature advanced technology inside out. In spite of their good looks, these highly efficient pumps are designed for years of trouble-free operation in the toughest environments. Easy to install and easy to service, the SEV and SE1 pumps ensure low long-term operating costs.

96047533 | SE1.80.80.15.4.50D

Alternatives

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The left column in the window shows an input overview detailing the inputs entered at the different steps in the wizard.

The right column of the window (below Grundfos recommends) shows the recommended pump followed by the quotation text describing the pump.

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When you click the blue link at the bottom right corner of the window named "Alternatives", you will see the full hit list containing the complete list of other Grundfos products matching the wizard input.

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Grundfos recommends:

	Product No	Product name	Phase	U [V]	Pump outlet	p max [bar]	Q actual [l/s]	H actual [m]	Energy [kW]
	96047533	2 x SE1.80.80.15.4.50D	3	380-415	DN 80	10	11.9	5.87	1633

Alternatives

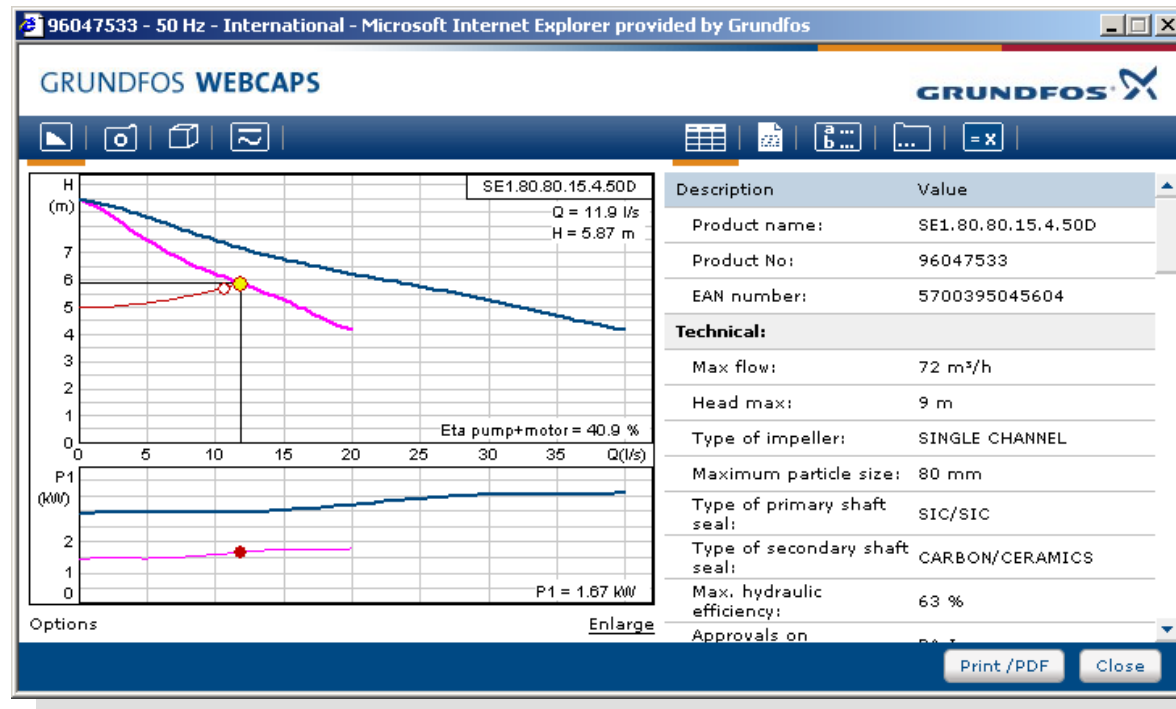
	Product No	Product name	Phase	U [V]	Pump outlet	p max [bar]	Q actual [l/s]	H actual [m]	Energy [kW]
	96048376	2 x SE1.80.80.15.4.50D	3	400-415	DN 80	10	11.9	5.87	1633
	96047387	2 x SE1.80.100.15.4.50D	3	400-415	DN 100	10	11.9	5.88	1604
	96048005	2 x SE1.80.100.15.4.50D	3	380-415	DN 100	10	11.9	5.88	1604
	96047769	2 x SEV.80.80.15.4.50D	3	380-415	DN 80	10	11.6	5.83	2028
	96048498	2 x SEV.80.80.15.4.50D	3	400-415	DN 80	10	11.6	5.83	2028
	96047745	2 x SEV.80.80.11.4.50D	3	380-415	DN 80	10	10.7	5.71	2593
	96048486	2 x SEV.80.80.11.4.50D	3	400-415	DN 80	10	10.7	5.71	2593

[96047533](#) | SE1.80.80.15.4.50D

Print / PDF Step 10 of 12 << < Back Next > Start sizing [Alternatives](#)

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When you click the blue link (product number) at the bottom left corner of the window, you will see the curve chart and technical and electrical data for the recommended pump.



The four icons above the curve chart have these functions:



displays the curve chart



displays the product picture



displays the dimensional drawings



displays the wiring diagram.



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In WinCAPS you have an additional option, if you also want to see the curve charts for other pumps included in the hit list. Click on the 'Curve settings' button and then mark the "Show curves for (other) pumps in the hit list" and select a pump from the drop-down list. The curve will now be displayed in the curve viewer together with the curve for the recommended pump.

☒ Show curves for (other) pumps in the hit list

96089661 - SENV.80.100.10.4.501.Q ▼

▼

▼

▼

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Select extra options for selected pump

Though you have reached a sizing result, there are a few extra options available for the pump recommended to you.

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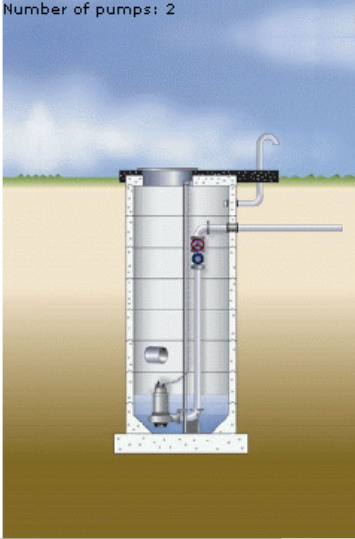
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Number of pumps: 2



96047533 | SE1.80.80.15.4.50D

Select extra options for selected pump

Lifecycle Cost Calculation ☒

Accessories ☒

Controls ☒

Controller ..

with float switches
with float switches
with air pressure
with electrodes

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Life cycle cost calculation

Life cycle cost analyses are useful in many situations.

They can be of great help when you want to

- analyse the life cycle cost of the selected pump
- choose a new pump solution
- estimate whether or not it would be profitable to replace an old pump system
- have documentation to support your decision.

A life cycle cost analysis provides an estimate of the total cost of owning and operating a pump system. It covers the initial investment and operating costs, giving a much more accurate picture of the actual cost involved.

Preparing a life cycle cost analysis involves a number of steps. **Note:** You must follow the order of the steps:

1. What to compare

You have four options:

- no comparison
- comparison with a pump in the hit list
- comparison with an existing pump
- comparison with a pump in the hit list and an existing pump.

2. Level of detail

You have three options:

- only energy consumption
- simple life cycle cost analysis
- complete life cycle cost analysis.

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Specific life cycle cost data

Depending on your choice under level of detail above, you can now enter specific life cycle cost data, such as

- initial investment
- energy costs
- maintenance costs
- etc.

You can leave input fields blank if they are not relevant in your particular case

Life cycle cost calculation result

Click the *Next*-button and you will see the result of the life cycle cost calculation.

The screenshots show the 'Specific Life Cycle Costs data' input screen in the Grundfos WebCAPS software. The interface includes fields for Pump A and Pump B, Pump type, Initial investment cost, Energy cost, and Maintenance cost. The 'Next' button is visible at the bottom of the screen.

The screenshot shows the 'Lifecycle Cost Calculation Result' screen in the Grundfos WebCAPS software. The screen displays the calculated results for Pump A and Pump B, including Initial investment cost, Energy cost, and Life Cycle Costs.

	Pump A	Pump B
Pump type	SE1.80.80.15.4.50D	SE1.80.80.15.4.50D
Initial investment cost: Pump system	350 EUR	400 EUR
Energy cost: Energy consumption	1633 kWh/a	3409 kWh/a
Life Cycle Costs	4588 EUR	8277 EUR

Prefer and show in the list:

☒ Pump A
☐ Pump B

Wastewater Sizing Guide

Accessories and controls

When you have finished sizing, click the *Next*-button once to select accessories and twice to select controls suitable for the selected pump. The lists for selecting accessories and controls are rule based. This ensures that can only select accessories or controls suitable for your selected pump.

The image displays two overlapping screenshots of the Grundfos WebCAPS 3.03 software interface, which is running in a Microsoft Internet Explorer browser. The browser window title is 'WebCAPS 3.03 Customized for Grundfos - Microsoft Internet Explorer provided by Grundfos'.

The top screenshot shows the 'Accessories' selection screen. The navigation bar includes 'Home', 'Catalogue', 'Literature', 'Service', 'Sizing' (selected), 'Replacement', and 'CAD Drawings'. The breadcrumb trail is 'Wastewater > Commercial buildings > Sewage'. The 'Accessories' section lists various components with checkboxes for selection:

- ☐ 96001984 Storz coupling, pump side, Storz B / Rp 3
- ☐ 96001989 DN 75 discharge hose with Storz couplings, Storz B
- ☐ 96005259 DN 65 discharge hose with Storz couplings, Storz
- ☐ 96102259 Base stand, 90 degree elbow, DN 100 / DN 100
- ☐ 96102313 Ring stand complete
- ☐ 96102382 Ring stand complete
- ☐ 96102201 Bracket, horizontal
- ☐ 96090993 Auto-coupling, DN 80
- ☐ 96102240 Auto-coupling, DN 100
- ☐ 96497464 Lifting chain, incl. s
- ☐ 96497465 Lifting chain, incl. s
- ☐ 96497466 Lifting chain, incl. s

The bottom screenshot shows the 'Controls' selection screen. The navigation bar and breadcrumb trail are identical. The 'Controls' section lists various control options with checkboxes:

- ☒ 1 96434043 LCD 108
- ☐ 62500013 Level switch complete for 2 switches
- ☐ 62500014 Level switch complete for 3 switches
- ☐ 62500015 Level switch complete for 4 switches
- ☐ 96003332 Float switch without mercury
- ☐ 96003338 Bracket for level switch
- ☐ 96003695 Float switch
- ☐ 96002084 Cable guard

Both screenshots show a status bar at the bottom with the product code '96047532', the price 'SE1.80.80.15.4.50D', and the step number 'Step 15 of 17' (top) and 'Step 16 of 17' (bottom). Navigation buttons like '<<', '< Back', 'Next >', and 'Start sizing' are visible in the bottom screenshot.

Wastewater Sizing Guide

Sizing summary

This is the final step of the sizing wizard providing you with an overview of the selected pump, accessories and controls.

The screenshot shows the 'Sizing Summary' page in the Grundfos WebCAPS application. The browser window title is 'WebCAPS 3.03 Customized for Grundfos - Microsoft Internet Explorer provided by Grundfos'. The application has a navigation bar with links: Home, Catalogue, Literature, Service, Sizing (active), Replacement, and CAD Drawings. There are 'Login' and 'Settings' buttons. The breadcrumb trail is 'Wastewater > Commercial buildings > Sewage'. On the left, there is a 3D cutaway diagram of a vertical pump unit installed in a trench. Below the diagram, the product code '96047533' and model 'SE1.80.80.15.4.50D' are displayed. The main content area is titled 'Sizing Summary' and lists the selected items: '2 SE1.80.80.15.4.50D' (Product number: 96047533, Price: On request) and '1 LCD 108' (Product number: 96434043, Price: On request). Below this list is a detailed description of the SE1.80.80.15.4.50D pump, highlighting its advanced features, heavy-duty construction, and suitability for various wastewater applications. The footer of the application window shows 'Step 17 of 17' and navigation buttons: '<<', '< Back', 'Next >', and 'Start sizing'.

WebCAPS 3.03 Customized for Grundfos - Microsoft Internet Explorer provided by Grundfos

GRUNDFOS WEBCAPS

Home | Catalogue | Literature | Service | **Sizing** | Replacement | CAD Drawings

Login Settings

Wastewater > Commercial buildings > Sewage

Sizing Summary

2 SE1.80.80.15.4.50D
Product number: 96047533, Price: On request

1 LCD 108
Product number: 96434043, Price: On request

SE1.80.80.15.4.50D
Highly advanced pumps with many unique features
The Grundfos SEV and SE1 ranges are technologically very advanced pumps designed for handling wastewater, process water and unscreened raw sewage in heavy-duty municipal utilities and industrial applications.
These heavy-duty pumps are built for years of trouble-free operation in the most demanding applications.
The pumps may be installed submerged or dry without motor cooling; in either case they are extremely reliable and very easy to service.
The efficient single-channel or SuperVortex impellers provide free passage of solids up to 100 mm. This greatly reduces the risk of clogging and ensures maximum up-time and reduced operating costs.
Advanced technology inside out
The Grundfos SEV and SE1 pumps feature advanced technology inside out. In spite of their good looks, these highly efficient pumps are designed for years of trouble-free operation in the toughest environments. Easy to install and easy to service, the SEV and SE1 pumps ensure low long-term operation costs.

96047533 | SE1.80.80.15.4.50D

Print / PDF Step 17 of 17 << < Back Next > Start sizing


Wastewater Sizing Guide

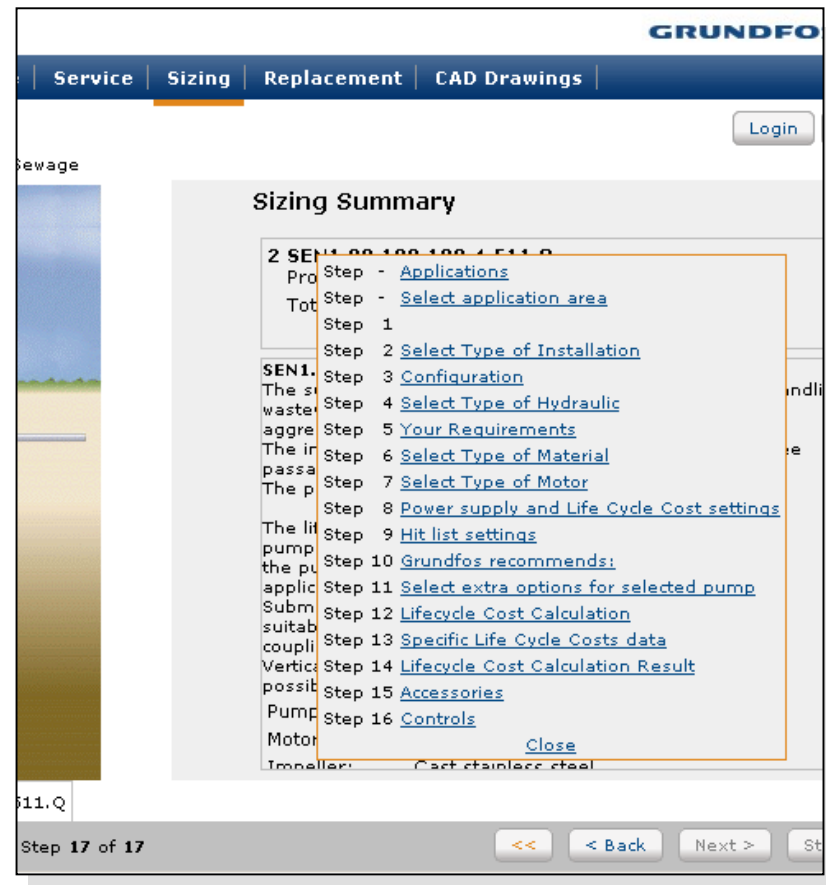
Other features

We have introduced a number of small improvements and new features in the latest version of WebCAPS and WinCAPS.

“Jumping” between steps in the sizing wizards

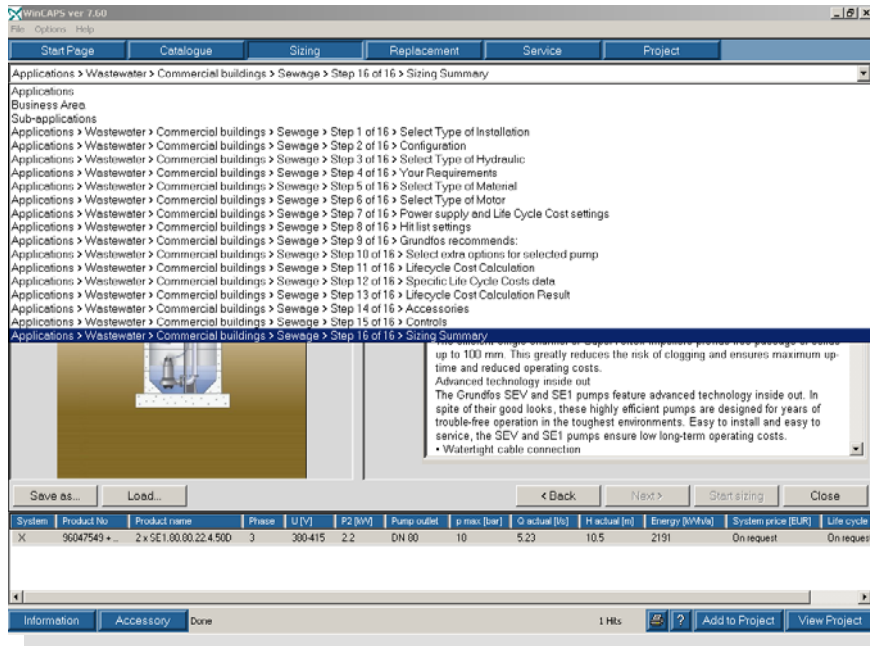
The order of the sizing wizards has been purposely designed. Nevertheless, you have the possibility of ‘jumping’ between the steps once input has been entered. To change previous input just jump back and enter the required changes into the input field. Then click the Start sizing button or jump forward to the step reached before.

In WebCAPS, you can click the -button to access a list of the steps you have worked on earlier in the wizard:

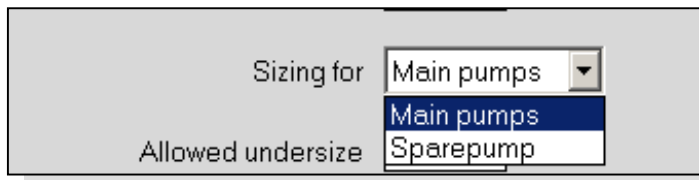


Wastewater Sizing Guide

In WinCAPS, this functionality is located in the bar at the top of the screen:



Sizing for standby pump

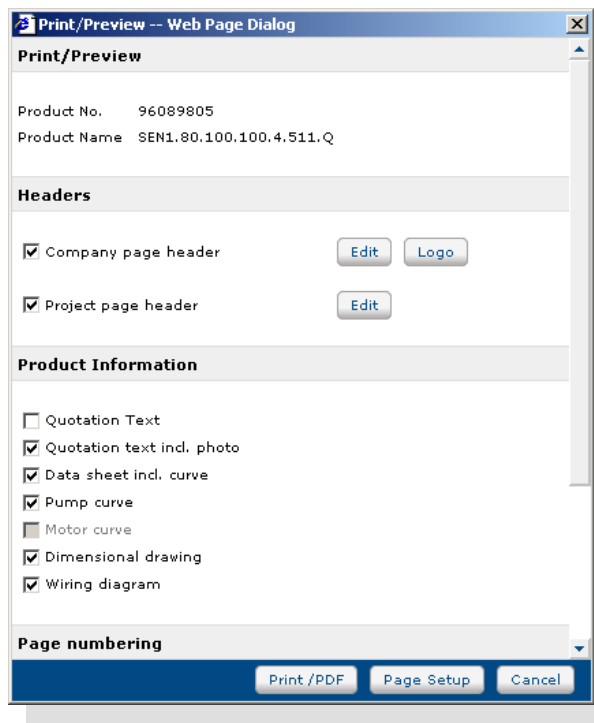


In some of the sub-applications you can add a bigger standby pump. This enables you to define the pipe system inside the pit and check the flow velocity both in the pit and in the pipe system outside the pit.

Wastewater Sizing Guide

Print-outs

When you have reached the sizing result, you may want to print it for documentation purposes or to e-mail it as a PDF file. Start by clicking on the Print/PDF-button, which opens the Print/Preview dialogue window. Here you define what you want to include in the print-out.



Print/Preview -- Web Page Dialog

Print/Preview

Product No. 96089805
Product Name SEN1.80.100.100.4.511.Q

Headers

☒ Company page header [Edit](#) [Logo](#)

☒ Project page header [Edit](#)

Product Information

☐ Quotation Text

☒ Quotation text incl. photo

☒ Data sheet incl. curve

☒ Pump curve

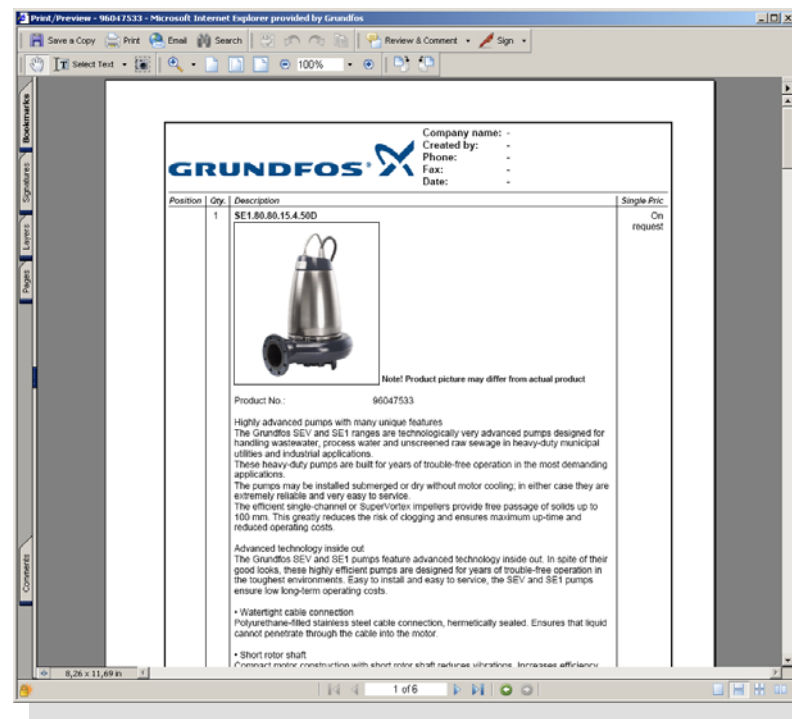
☐ Motor curve

☒ Dimensional drawing

☒ Wiring diagram

Page numbering

[Print /PDF](#) [Page Setup](#) [Cancel](#)



Print/Preview - 96047533 - Microsoft Internet Explorer provided by Grundfos


Save a Copy Print Email Search 100% Review & Comment Sign

Select Text

GRUNDFOS

Company name: -
Created by: -
Phone: -
Fax: -
Date: -

Position	Qty.	Description	Single Price
1		SE1.80.80.15.4.500	On request



Note! Product picture may differ from actual product

Product No.: 96047533

Highly advanced pumps with many unique features
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- Watertight cable connection
Polyurethane-filled stainless steel cable connection, hermetically sealed. Ensures that liquid cannot penetrate through the cable into the motor.
- Short rotor shaft
Compact motor construction with short rotor shaft reduces vibrations. Increases efficiency.

8,26 x 11,69 in 1 of 6

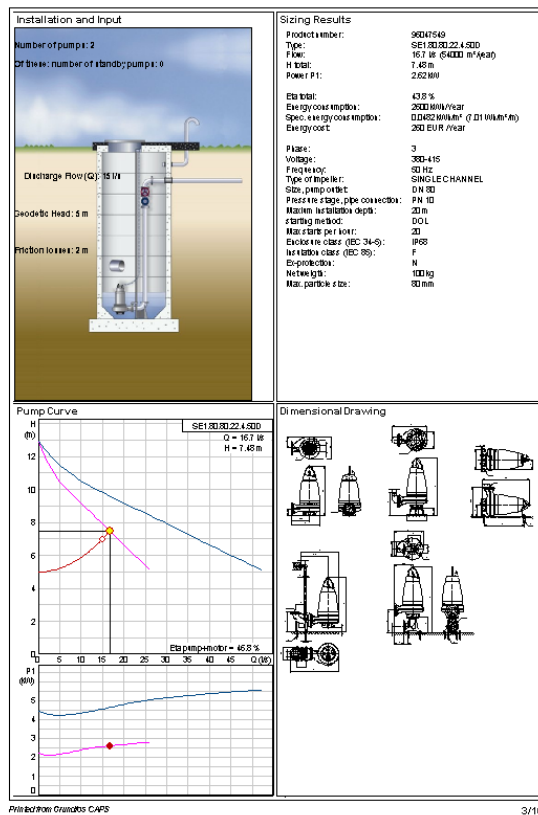
Click the Print/PDF-button to generate a PDF file, which can be either printed or saved as a PDF file on your hard drive.

Wastewater Sizing Guide

WinCAPS includes a few extra print options in the form of a summary page and a pipe-friction-loss sheet, which can be selected from the print settings.

As the title suggests, the summary page contains a summary of the main elements of the sizing process giving you an overview of the sizing process and result. The pipe-friction-loss sheet lists the input given in the pipe-friction-loss calculators making it easier to document the calculations to a third party.

Summary page (WinCAPS only)



Pipe-friction-loss sheet (WinCAPS only)

