PEDROLLO®
the spring of life

BASIC INSTRUCTIONS ON:

"THE SPRING OF DATA"

THE PEDROLLO PUMP SELECTOR

Rev-3b
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SUMMARY

The spring of data

The Pedrollo pump selector

https://springofdata.pedrollo.com/Selector

1) General features

Introduction

The software «The spring of data» would be a user-friendly tool which purpose is to assist the customer when selecting the pump/s according to given requirements and to provide him base technical data together with the performance curve.

This first release represents the beginning of a journey that we intend to engage in cooperation with users. We have a plan for adding features and data in the next period, but we also want to have the opinions of "key users" in order to get a software of more and more effective support to those who work in the world of centrifugal pumps.

The database, on which the selector works, gets the information directly from the company management system of the technical data (PLM). In this way it will be always updated.

The software speaks in multiple languages as:

Italian 	English 	German 			
French 	Spagnish 	Portuguese 			

1) General features

General features

The pump selector contains all data currently available in the catalgue, and in addition to that, offers the possibility (for registered users) to get data and/or curves about:

- the motor input power, to better design the electrical supply line;
- the overall efficiency, to select the electro-pump that works in the best conditions;
- Ratio between Starting current and Rated current , to define the size of the control box.

In the Print-out document are displayed:

- Technical data,
- Performance curves,
- The construction with materials and overall dimensions.

Then there is the possibility to download the instruction manual in PDF format.

To access to further technical informations (pump input power, pump efficiency, NPSH, max sound pressure level) and documents (2D & 3D overall drawings) , please forward a request for an higher authorization level through our sales network.

1) General features

Support tools

The selector offers useful tools in order to better identify:

- the requested flow (flow calculator) based on the specific application,
- The head by means of the fiction losses calculation (still under development).

During the time, they will be added of further cases as the need arises and / or data collection increases. However, despite our efforts, the following warning applies:

WARNING

The results obtained by this calculator are based on statistical data so they have to be considered purely indicative.
If a more accurate or certified calculation is required, refer to a local qualified consultant as Pedrollo S.p.A. has no liability for the conformity of the results to the real needs, to the local regulations or laws of the country where the electro-pump is installed.

1) General features

Filtering and product classification

Filtering is structured according to the scheme and classification in Pedrollo catalogue.

First filtering level includes:

- Pump typology = surface, borehole, submersible;
- Liquid type = clean water, clear water, dirty water, sewage water;
- Application = household, civil, agriculture, industrial.

The second filtering level goes deeper into the catalogue classification. For each product typology, product groups are suggested and then the families, that are indicated with an abbreviation we hope it will become friendly for the new users too.

The largest families are described with more than one abbreviation according to the size and /or flow rate, as this leads to a different construction style. For example, the single impeller surface pumps CP pumps are classified as follows: CP small; CP Medium; CP Large. A similar classification applies to the standardize centrifugal F 2 poles, to categorize different constructions types according to the size of the motor.

1) General features

NOTES

The software certainly works properly with the following browsers:

Google CHROME, Microsoft EDGE, Mozilla Firefox

The software has different behaviours depend on the connection type:

ADSL = with this connection sometimes the selection could be very slow.
If it is taking too long time, click STOP and launch the selection again.
Optic fiber = the connection is faster and more regular.

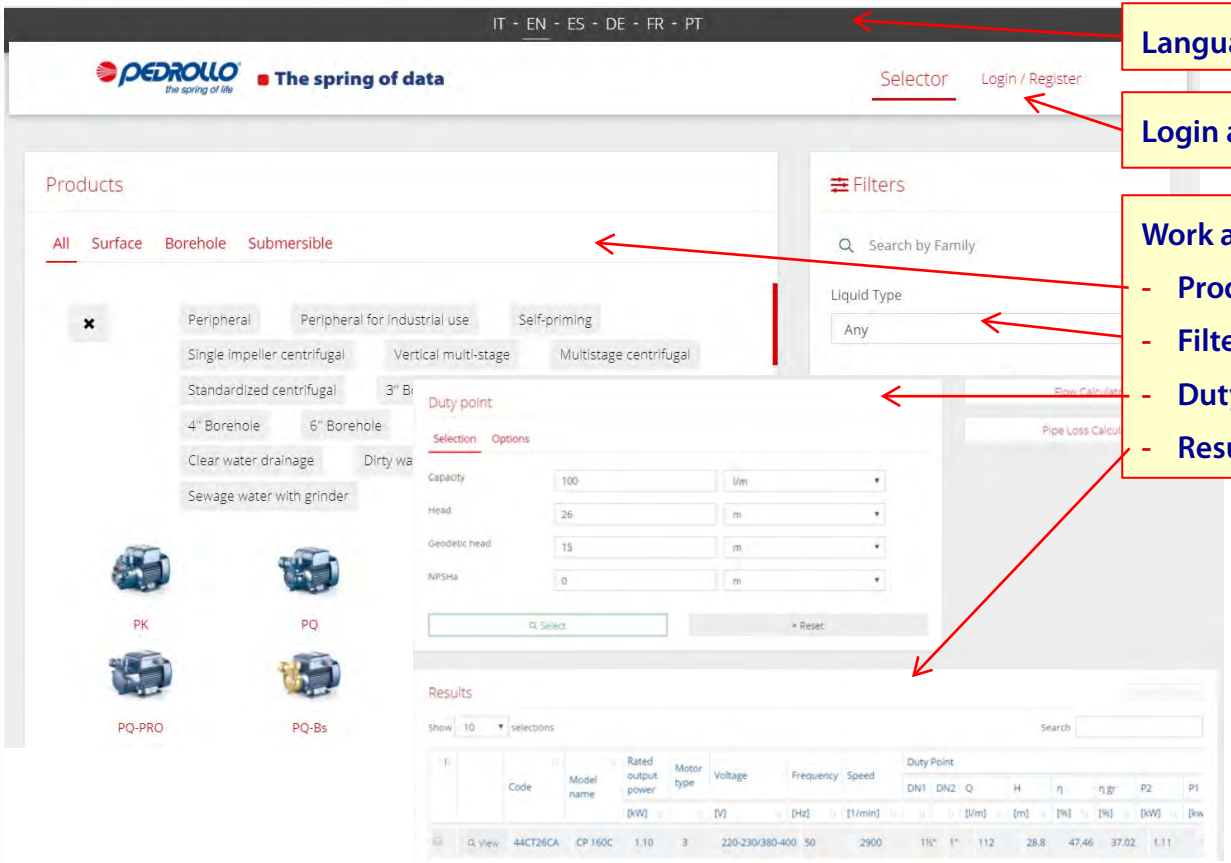
The software is free and there is no obligation to log in.

For possible log in, you must have an account on one of the main "social media".

Finally, please remenber that:

The software does not work without internet connection.
It is optimized for desktop, tablet and mobile.

2) Home Page



Language selection

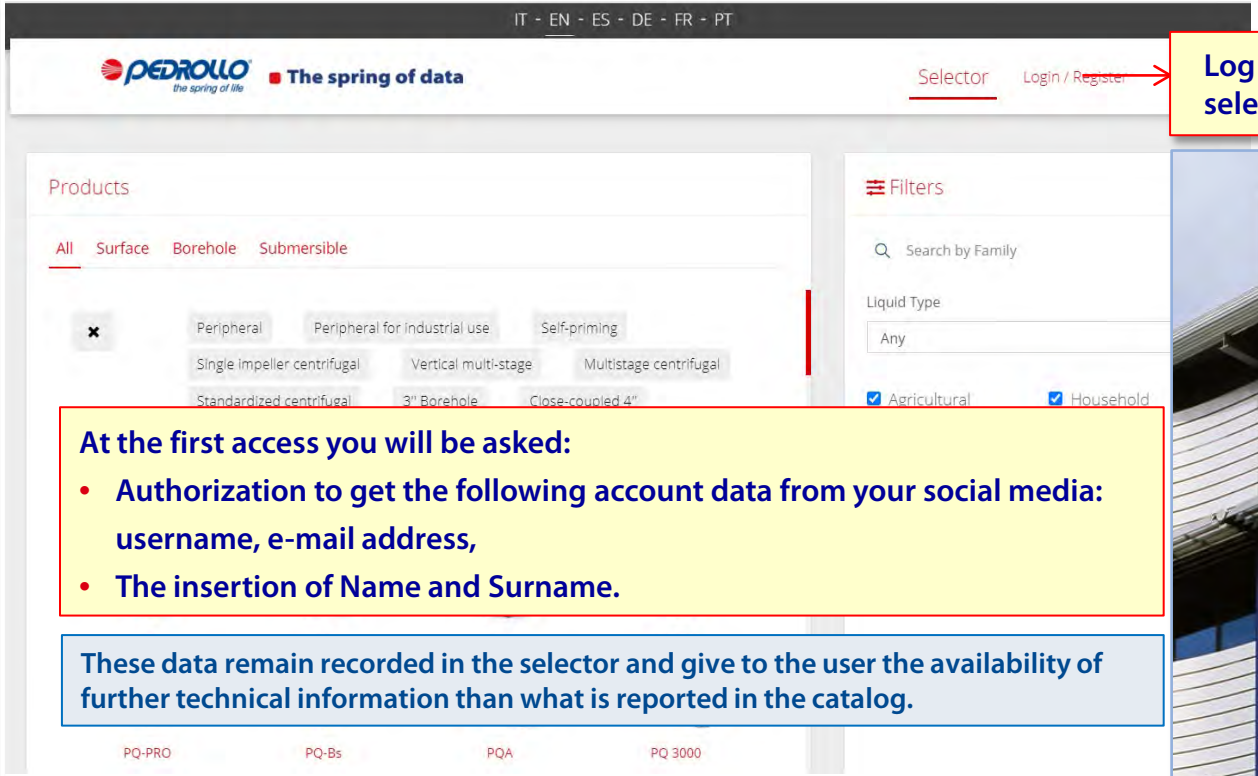
Login and register (on first access)

Work areas:

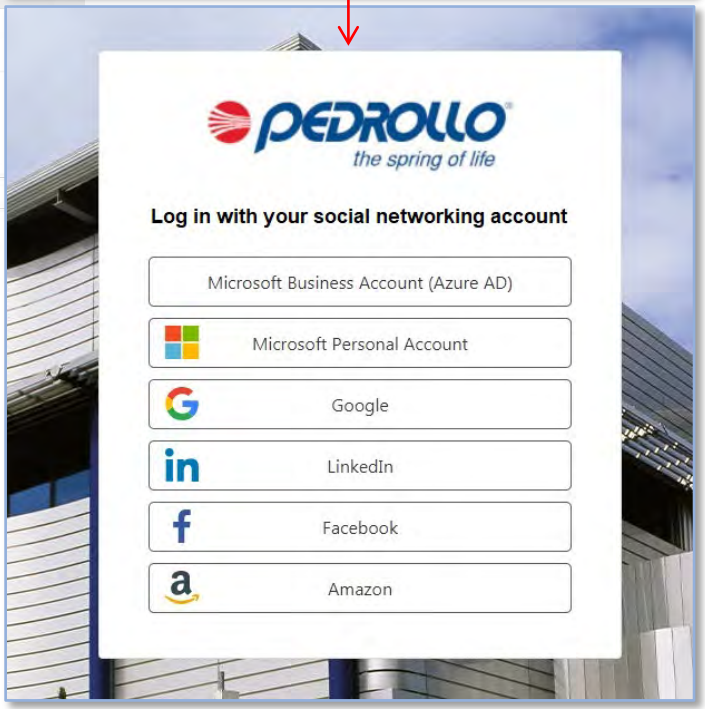
- **Products and selection**
- **Filtering**
- **Duty point and support tools**
- **Results**

All areas can be accessed with vertical scrolling

3) Log in



Log in: a new view will appear where you can select which account you want to log in with.



At the first access you will be asked:

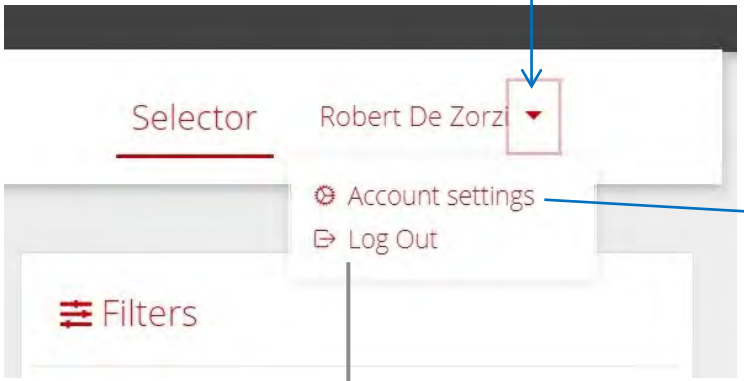
- **Authorization to get the following account data from your social media: username, e-mail address,**
- **The insertion of Name and Surname.**

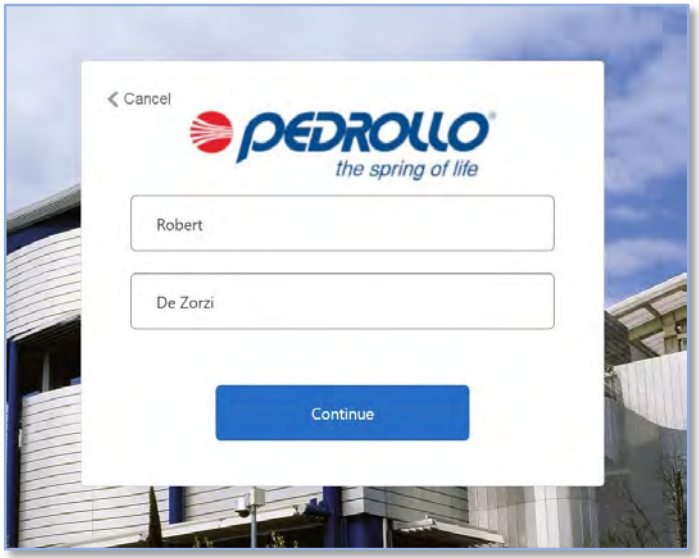
These data remain recorded in the selector and give to the user the availability of further technical information than what is reported in the catalog.

3) Log in

Upon successful login, your Name and Surname appear in this area

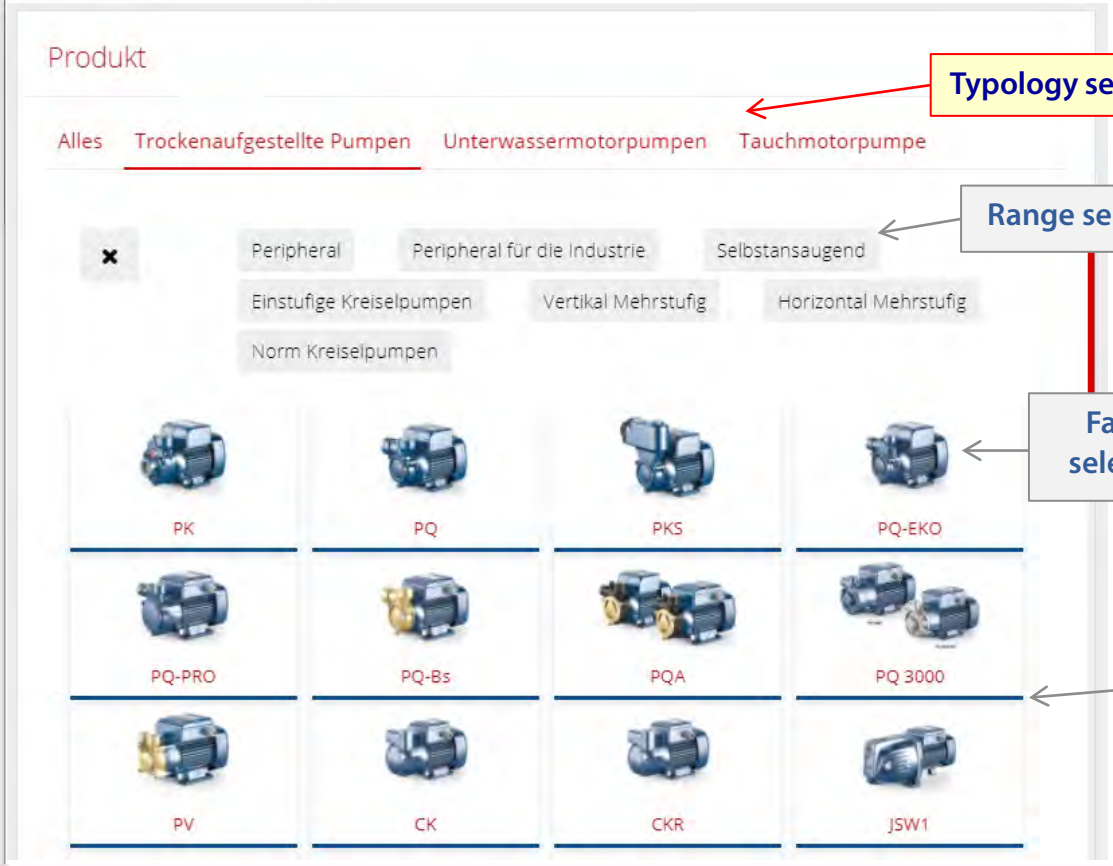
By pressing this button it is always possible to go back to the registration page and update your Name and Surname.





Log Out button:
you go back to being a generic user (anonymous)

4) Products area



Typology selection

Range selection

Family selection

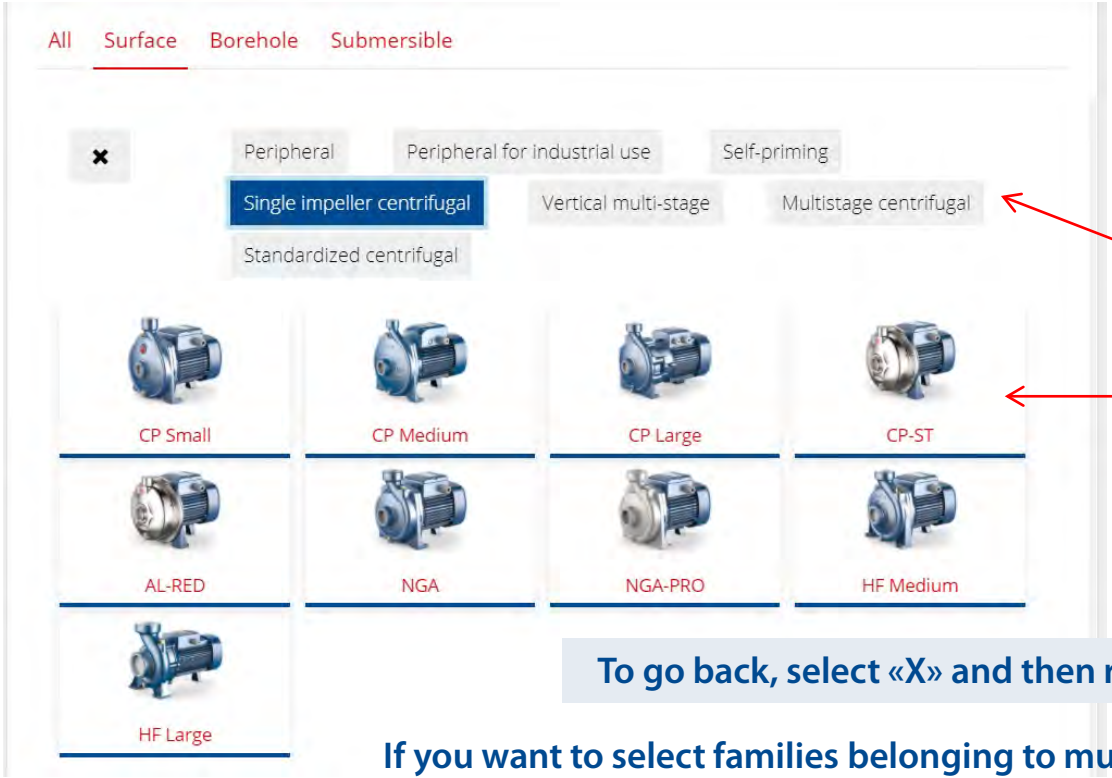
Once product type is selected, all related families are displayed and pre-selected

If you want to de-select ALL while keeping them visible for selective choice, press on the ✖ top left

The blu bar below the label means that the family is selected

To go back, select «All»

4) Products area



Once the type has been chosen, the Range can be selected: only the families belonging to the chosen Range will be displayed and pre-selected.

Range choice

Family selection

It is possible to deselect the families you don't need or re-select them in case of mistakes.

To go back, select «X» and then re-select the type.

If you want to select families belonging to multiple ranges, you must do the choice at the upper level, that is, by type.

4) Products area

Typology and Range

SURFACE PUMPS

- Peripheral
- Pripheral for industrial use
- Self priming
- Single impeller centrifugal
- Vertical multi-stage
- Horizontal multi-stage
- Standardized centrifugal

SUBMERSIBLE PUMPS

- 4" Peripheral
- 4" Close-coupled
- 3" Borehole
- 4" Borehole
- 6" Borehole
- Close-coupled for open wells and tanks

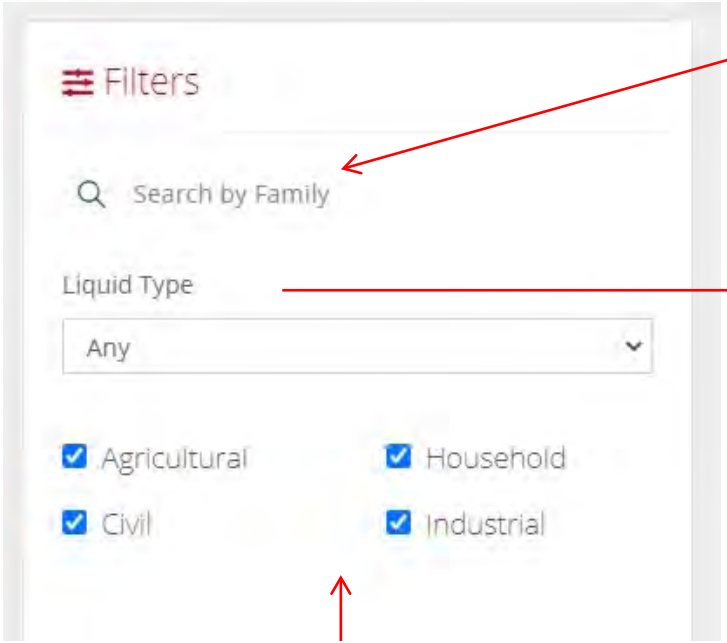
SUBMERSIBLE PUMPS

- Clear water drainage
- Dirty water drainage
- Sewage pumps
- Sewage pumps wit grinder

The products that doesn't have a unique performance curve Flowrate-Head, at the moment, are not included in the pump selector. We refer to:
Electronic circulator,
Variable speed pumps (with integrated Inverter),

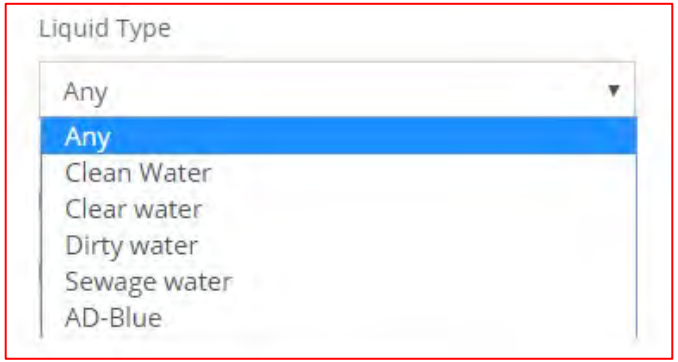
About booster units with two pumps and pumps with accessories, please refer to the base product with which they are composed.

5) Filtering



Selection by family

Quick selection of a specific family when you already have a precise idea of what type of pump you want to select. The selection is refined as you enter the text characters.



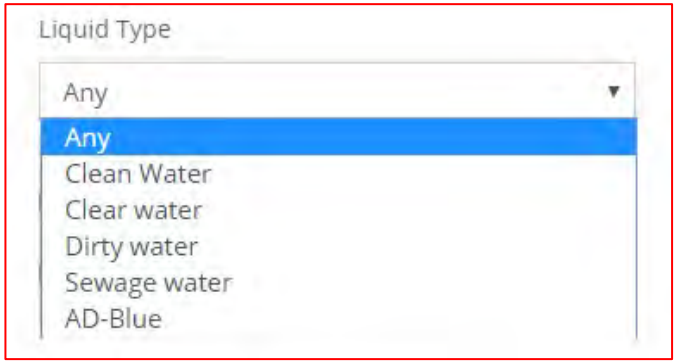
Here you can find the sub-division of supported liquids shown in the catalog at the top of the first page of each family

UTILIZATION selection

Here you can find the subdivision of the different applications listed in the catalog at the top of the first page of each family

5) Filtering

MEANING OF LIQUID TYPE



Clean water:
filtered / decanted rainwater,
well water with little sand content.

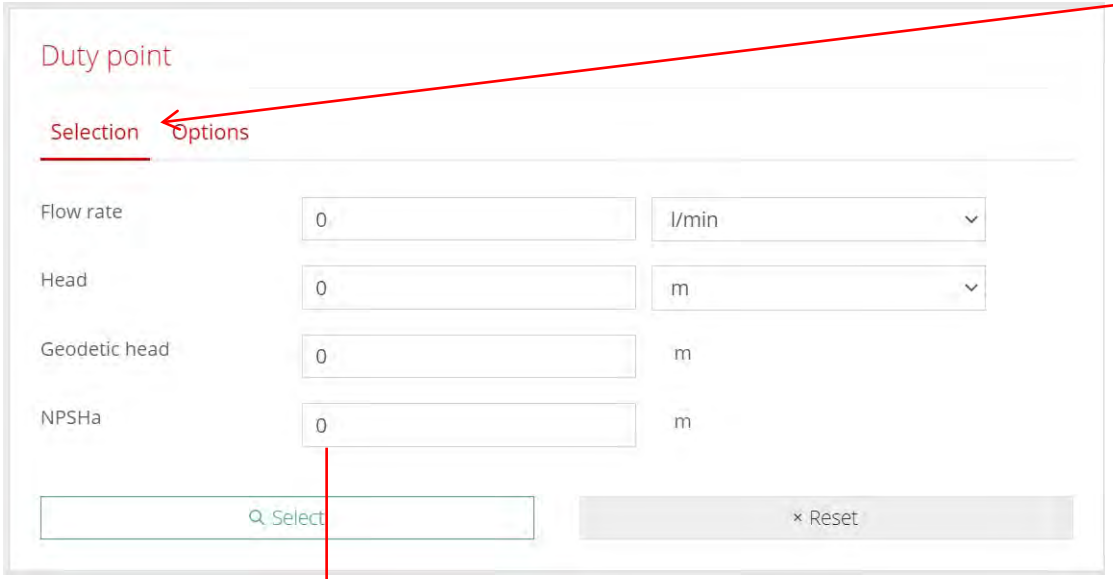
Clear water:
white water (cooling water coming from industrial plants);
water used to wash the roads, rainwater or rainwater runoff;
drainage waters, basements, ramps, roads;
Groundwater, well water;
Cloudy water with no fibers / filaments.

Dirty water:
utility waste water (not toilet);
rainwater and drainage in general.

Sewage water:
toilet waste water;
dirty water in general and with suspended bodies.

AD-Blue:
Urea-based liquid used for the treatment of exhaust gases of diesel engines.

6) Duty point



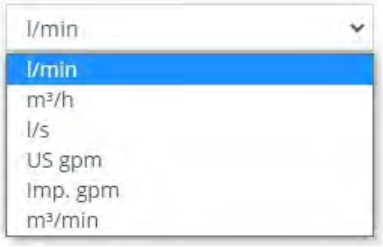
Selection

In this section, basic data for the selection must be entered:

- **Requested flow rate**
- **Requested head**

With related units of measure:

Flow rate

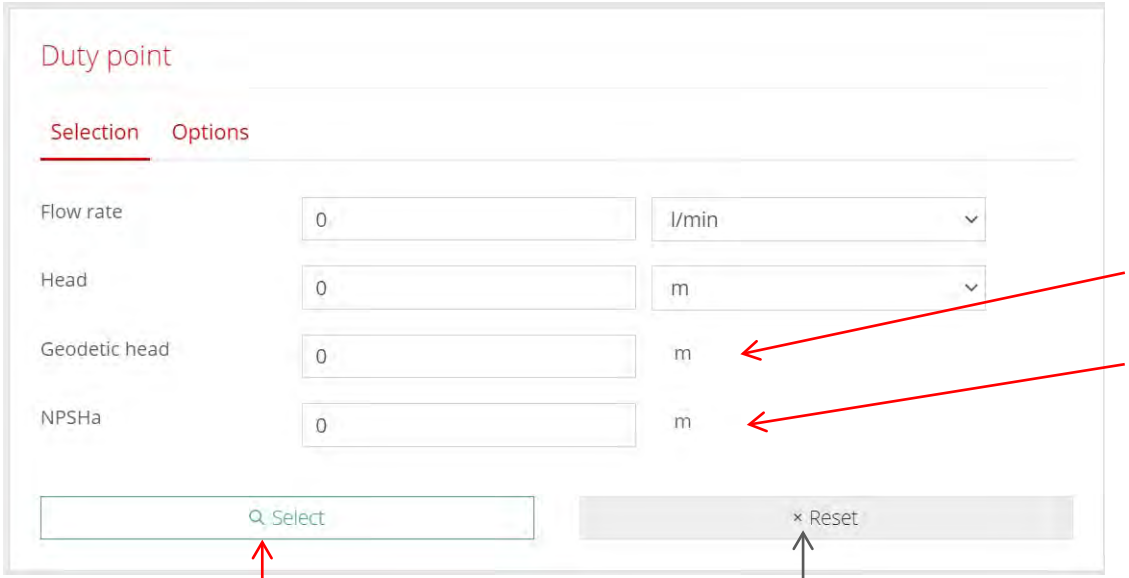


Head, Geodetic head, NPSHa

(unique choise for the three parameters)

If you leave everything at 0, all products of the family are selected

6) Duty point



Selection start

Key that resets the selection and related data including the product family or families

Selection

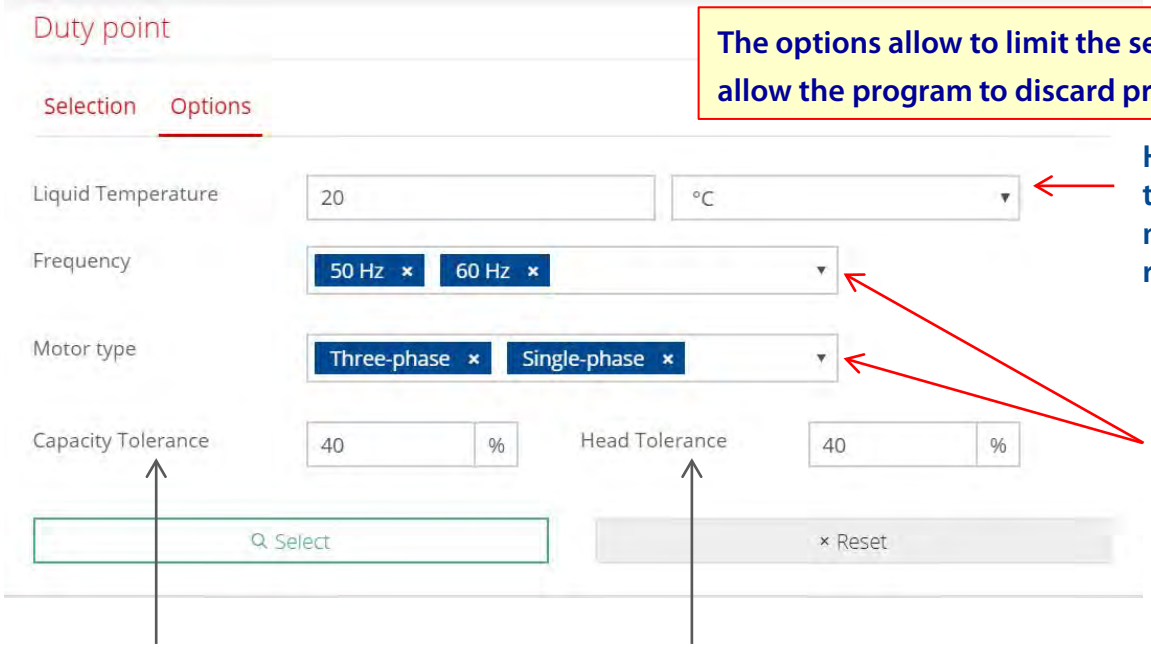
It is also possible to add:

- **The geodesic height that defines the characteristic curve of the plant**
- **The available NPSH of the system (when known) to possibly discard pumps that do not have sufficient suction capacity at the operating point.**

The geodesic height cannot be greater than the head. In fact, the difference between head and geodetic height corresponds to the friction losses value at the requested flow rate.

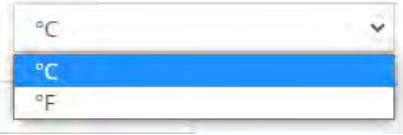
6) Duty point

Options



The options allow to limit the selection by subjecting other conditions that allow the program to discard products that do not satisfy them.

Here it is possible to indicate the maximum temperature of the liquid to be pumped which must be satisfied by selected pumps and the related unit of measurement:



Here it is possible to indicate the basic characteristics of the expected power supply that serves to define the type of motor.

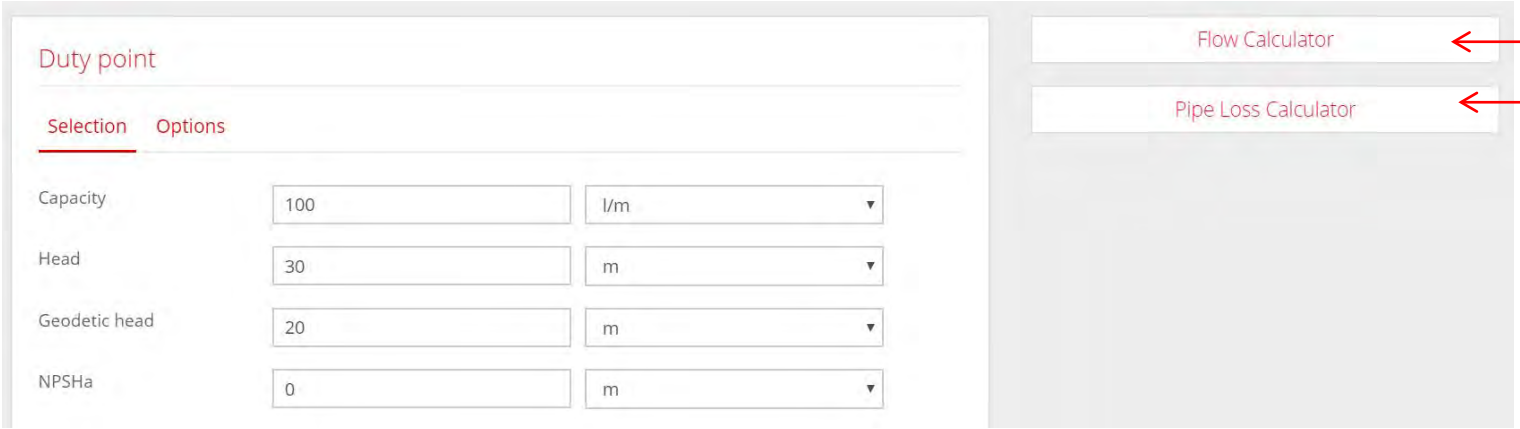
All options are active by default.

The flow and head tolerances can be adjusted to widen or narrow the range of product selection. Proposed default values represent a good compromise and it is advisable not to change them, at least in this phase.

7) Support tools

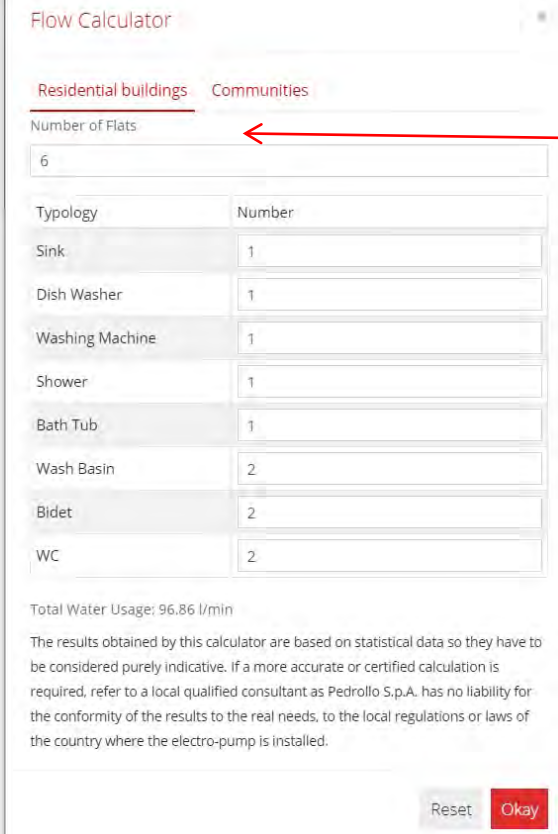
Calculators

To support the user in defining the flow rate and head he needs, two support tools are available.



The current "Flow calculator" is a base version but it will be improved with new options and standards reference where available.
The "Pipe loss calculator" is currently only sketched and it's under development. The tool will also offer the possibility of calculating the NPSH available in the system.

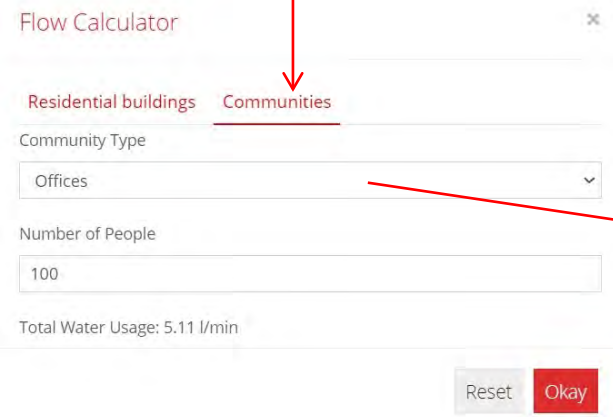
7) Support tools



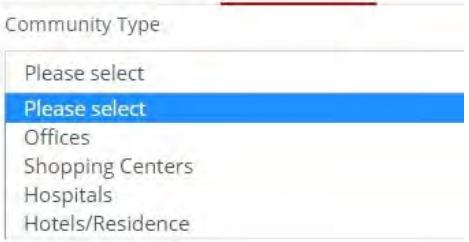
Flow rate calculator

The first selection to make is choosing between:

- **Residential buildings (houses)**
- **Not residential (offices, shopping malls, hospitals, hotels…)**



For «not residential», a further selection is necessary:



The «Total Water usage» is the sum of the two type of buildings when both sheets are filled in.

By clicking OK, we confirm the result which is transferred on the flow rate in the operating point

8) Results

Choise of the maximum number of rows per table page

10
10
25
50
100

Results table

Results

Compare Selected

Start comparison

Show 10 selections

Search

Here you can select a specific product or group of products from the list

		Code	Model name	Rated output power	Motor type	Voltage	Frequency	Speed	DN1	DN2	Duty Point				
											Q	H	η	η gr	P2
				[kW]		[V]	[Hz]	[1/min]			[l/m]	[m]	[%]	[%]	[kW]
☑	View	44CM26BA1	CPm 160B	1.50	1	220-230	50	2900	1½"	1"	112	34.0	48.48	34.72	1.29
☐	View	44CT26BA	CP 160B	1.50	3	220-230/380-400	50	2900	1½"	1"	112	34.0	48.48	38.38	1.29
☑	View	44CI19A1	CPm 190	1.50	1	220-230	50	2900	1¼"	1"	111	33.6	-	24.38	-
☐	View	44CIT19A	CP 190	1.50	3	220-230/380-400	50	2900	1¼"	1"	111	33.6	-	26.75	-
☑	View	44CM216C1A1	CPm 220C	2.20	1	220-230	50	2900	2"	2"	111	33.5	34.93	26.16	1.74
☐	View	44CT216C7A	CP 220C	2.20	3	220-230/380-400	50	2900	2"	2"	111	33.5	34.93	29.55	1.74
☐	View	44CP190I16A	CP 190-ST6	1.50	3	220-230/380-400	50	2900	1¼"	1"	104	31.3	50.61	39.03	1.06
☐	View	44CP190I16A1	CPm 190-ST6	1.50	1	220-230	50	2900	1¼"	1"	104	31.3	50.61	34.41	1.06
☐	View	44CP190IA	CP 190-ST4	1.50	3	220-230/380-400	50	2900	1¼"	1"	104	31.3	50.61	39.03	1.06
☐	View	44CP190IA1	CPm 190-ST4	1.50	1	220-230	50	2900	1¼"	1"	104	31.3	50.61	34.41	1.06

Tick to select for comparison

Access «product data» details

Acting on the arrows is possible to reorder the table for increasing or decreasing values.

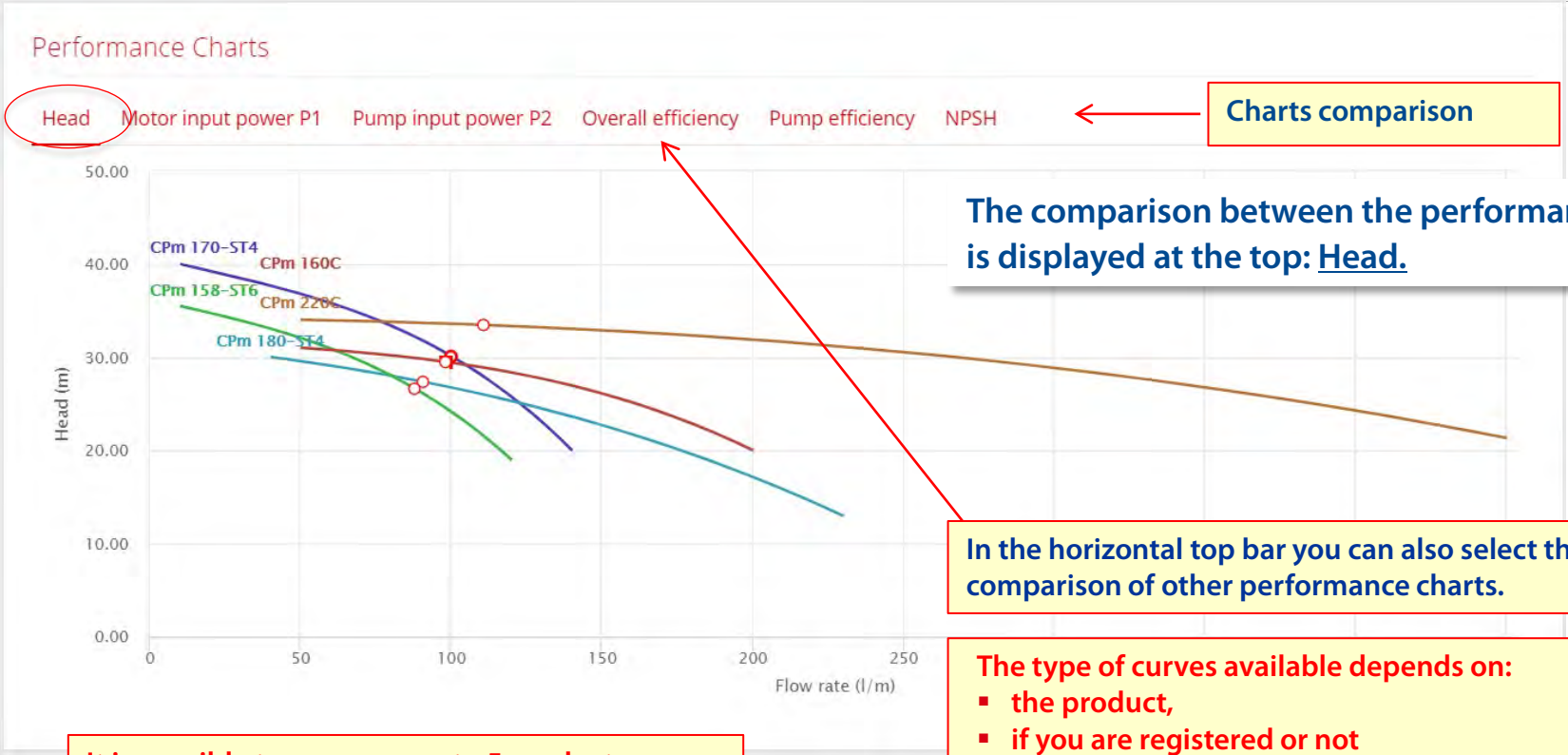
Showing 1 to 10 of 38 selections

Horizontal scroll bar

Previous 1 2 3 4 Next

Buttons to browse the other pages

9) Comparison



Charts comparison

The comparison between the performance charts is displayed at the top: Head.

In the horizontal top bar you can also select the comparison of other performance charts.

The type of curves available depends on:
- the product,
- if you are registered or not
- if you got an higher authorization level.

It is possible to compare up to 5 products

9) Comparison

Pumps data comparison

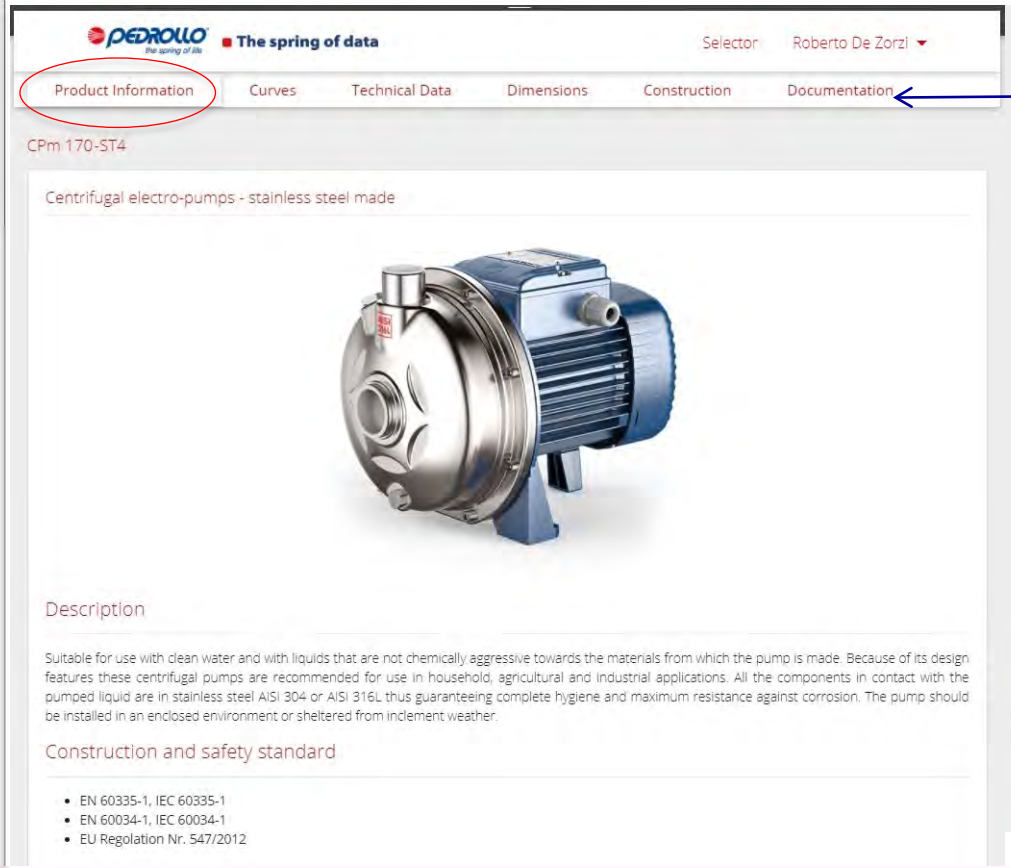
The comparison of the selection data is displayed in the lower part.

	CPm 160C	CPm 170-ST4	CPm 180-ST4
	View	View	View
			
Product			
Code	44CM26CA1	44CP170IA1	44CP180IA1
Family	CP Medium	CP-ST	CP-ST
Group	Single impeller centrifugal	Single impeller centrifugal	Single impeller centrifugal
Typology	Surface	Surface	Surface
Duty Point			
Flow rate (actual)	98 l/m	100 l/m	91 l/m
Head (actual)	29.5 m	30.1 m	27.4 m
Pump Efficiency	44.76 %	45.00 %	48.90 %
Overall Efficiency	33.67 %	32.05 %	34.95 %
Pump input power P2	1.06 kW	1.10 kW	0.83 kW
Motor input power P1	1.41 kW	1.54 kW	1.16 kW
NPSH	1.80 m	2.87 m	2.13 m
Input Data			
Rated flow rate (requested)	100 l/m	100 l/m	100 l/m

Selecting the "View" button opens the page:
«Product Data»

Use horizontal scroll arrows to see all selected products

10) Product data



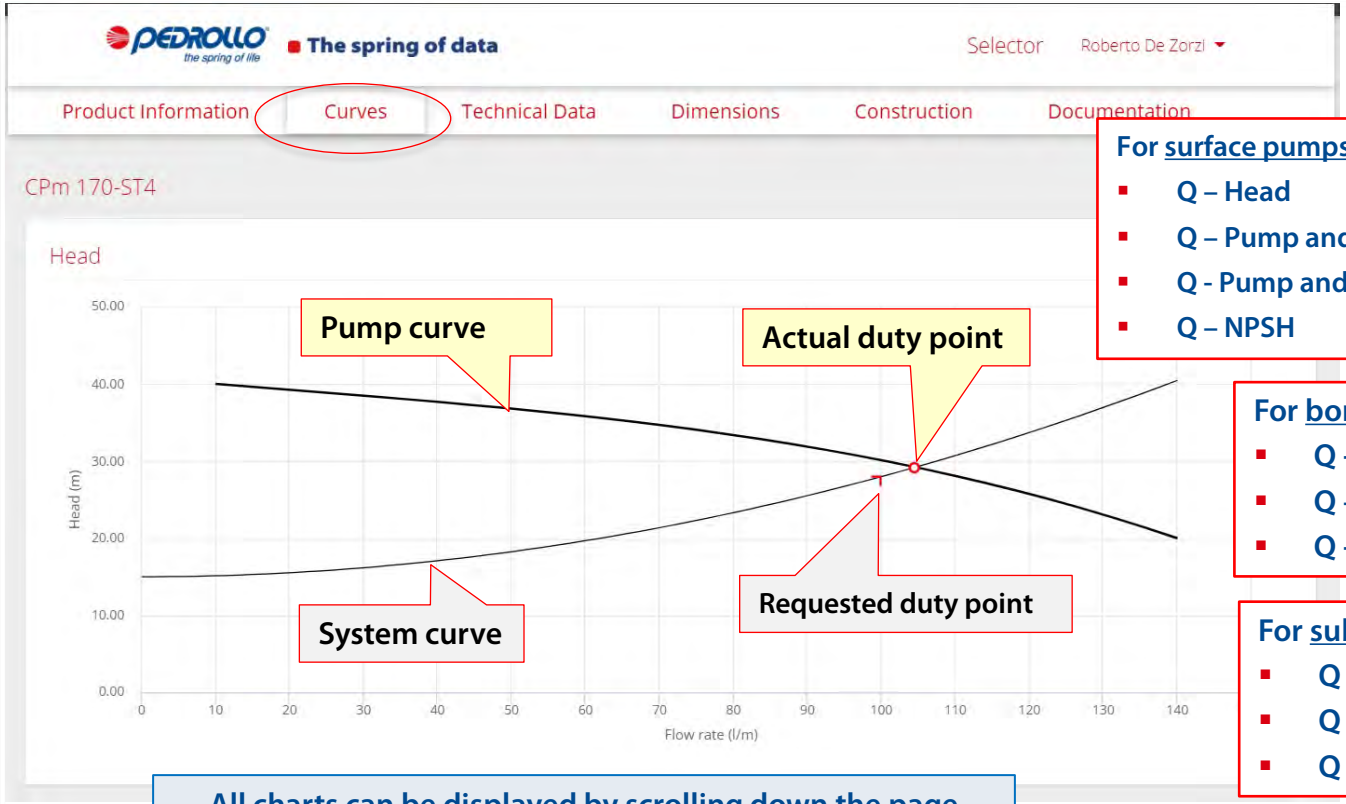
Product data are displayed in 6 tabs

Tabs include the contents of the catalog starting from the general information of the pump family to which the selected model belongs.

In terms of performance, all the graphs are displayed versus the flow rate, and, like for the comparison, the types available depend on products and if you are registered or not.

This is the button for printing output data. It is present on all tabs.

10) Product data



Performance curves

For surface pumps the following curves are available:

- Q – Head
- Q – Pump and overall efficiency
- Q - Pump and motor input power
- Q – NPSH

For borehole pumps:

- Q - Head
- Q – Pump and overall efficiency
- Q - Pump and motor input power.

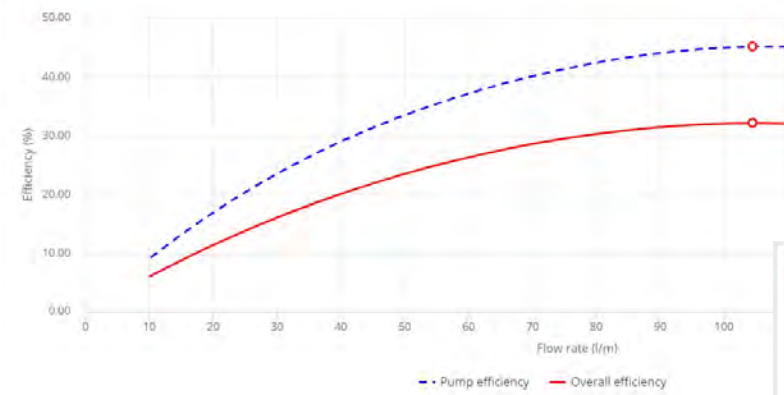
For submersible pumps:

- Q - Head
- Q – Overall efficiency
- Q - Motor input power.

All charts can be displayed by scrolling down the page

10) Product data

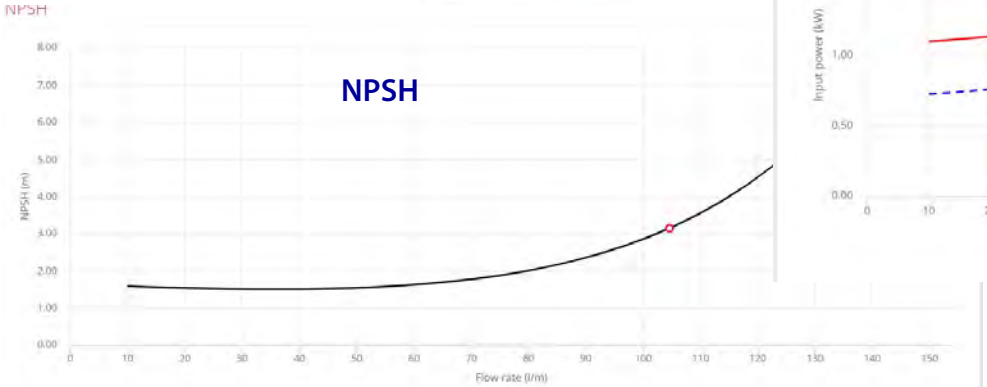
Efficiencies



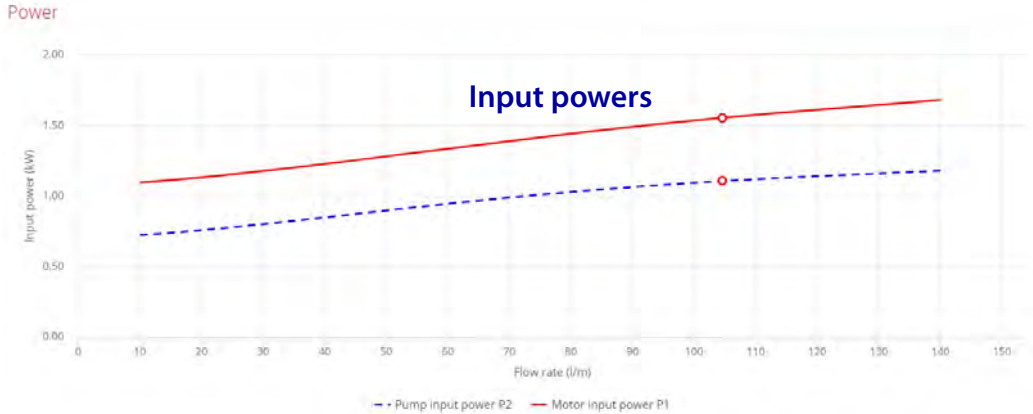
Performance Curves

Actual duty point

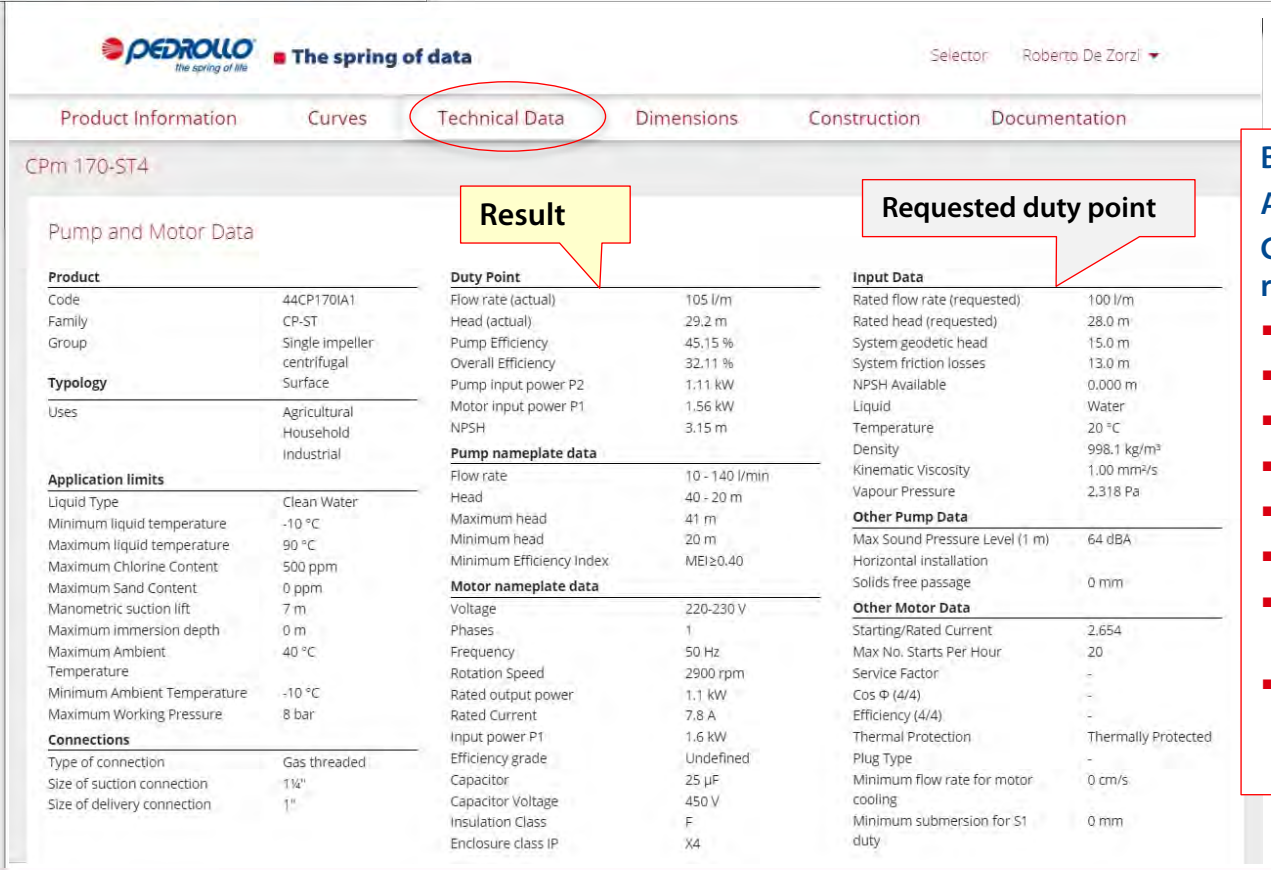
NPSH



Input powers



10) Product data



PEDROLLO the spring of life — The spring of data — Selector: Roberto De Zorzi

Product Information | Curves | Technical Data | Dimensions | Construction | Documentation

CPm 170-ST4

Pump and Motor Data

Result

Requested duty point

Product	
Code	44CP170IA1
Family	CP-ST
Group	Single impeller centrifugal
Typology	Surface
Uses	Agricultural Household Industrial

Application limits	
Liquid Type	Clean Water
Minimum liquid temperature	-10 °C
Maximum liquid temperature	90 °C
Maximum Chlorine Content	500 ppm
Maximum Sand Content	0 ppm
Manometric suction lift	7 m
Maximum immersion depth	0 m
Maximum Ambient Temperature	40 °C
Minimum Ambient Temperature	-10 °C
Maximum Working Pressure	8 bar

Connections	
Type of connection	Gas threaded
Size of suction connection	1¼"
Size of delivery connection	1"

Duty Point	
Flow rate (actual)	105 l/m
Head (actual)	29.2 m
Pump Efficiency	45.15 %
Overall Efficiency	32.11 %
Pump input power P2	1.11 kW
Motor input power P1	1.56 kW
NPSH	3.15 m

Pump nameplate data	
Flow rate	10 - 140 l/min
Head	40 - 20 m
Maximum head	41 m
Minimum head	20 m
Minimum Efficiency Index	MEI≥0.40

Motor nameplate data	
Voltage	220-230 V
Phases	1
Frequency	50 Hz
Rotation Speed	2900 rpm
Rated output power	1.1 kW
Rated Current	7.8 A
Input power P1	1.6 kW
Efficiency grade	Undefined
Capacitor	25 µF
Capacitor Voltage	450 V
Insulation Class	F
Enclosure class IP	X4

Input Data	
Rated flow rate (requested)	100 l/m
Rated head (requested)	28.0 m
System geodetic head	15.0 m
System friction losses	13.0 m
NPSH Available	0.000 m
Liquid	Water
Temperature	20 °C
Density	998.1 kg/m³
Kinematic Viscosity	1.00 mm²/s
Vapour Pressure	2.318 Pa

Other Pump Data	
Max Sound Pressure Level (1 m)	64 dBA
Horizontal installation	
Solids free passage	0 mm

Other Motor Data	
Starting/Rated Current	2.654
Max No. Starts Per Hour	20
Service Factor	-
Cos Φ (4/4)	-
Efficiency (4/4)	-
Thermal Protection	Thermally Protected
Plug Type	-
Minimum flow rate for motor cooling	0 cm/s
Minimum submersion for S1 duty	0 mm

Technical data

Besides Input data along with

Actual duty point results,

Catalogue and pump nameplate data are reported and listed as:

- Code and product classification
- Uses
- Application limits
- Connections
- Pump nameplate data
- Motor nameplate data
- Additional pump data (including the dimension about solids free passage)
- Additional motor data (including the ratio between starting current and rated current)

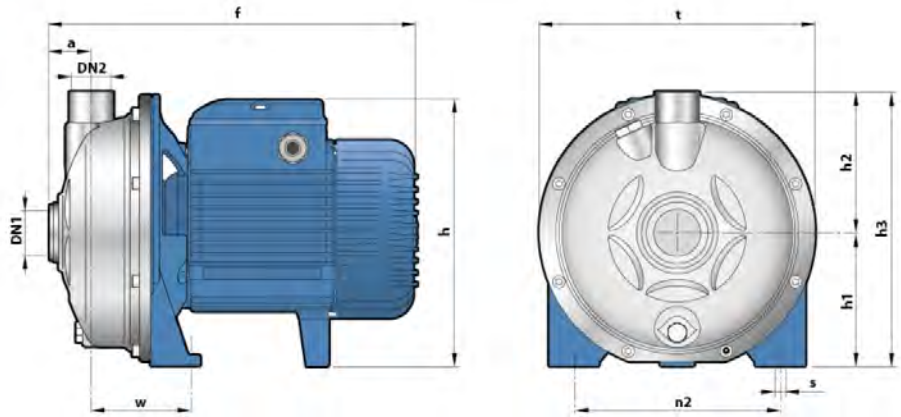
10) Product data

PEDROLLO the spring of data — Selector — Roberto De Zorzi

Product Information | Curves | Technical Data | Dimensions | Construction | Documentation

CPm 170-ST4

Dimensions

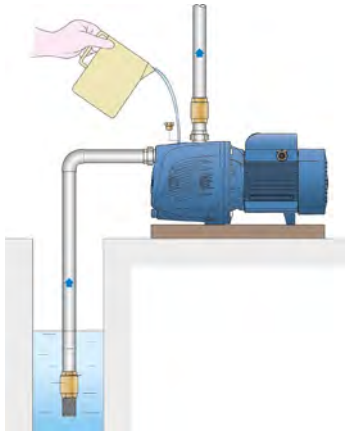


DN1	DN2	a	f	h	h1	h2	h3	n2	s	t	w	Kg
1¼"	1"	33.5	368	251	120	117.5	237.5	180	11	245	86.5	14

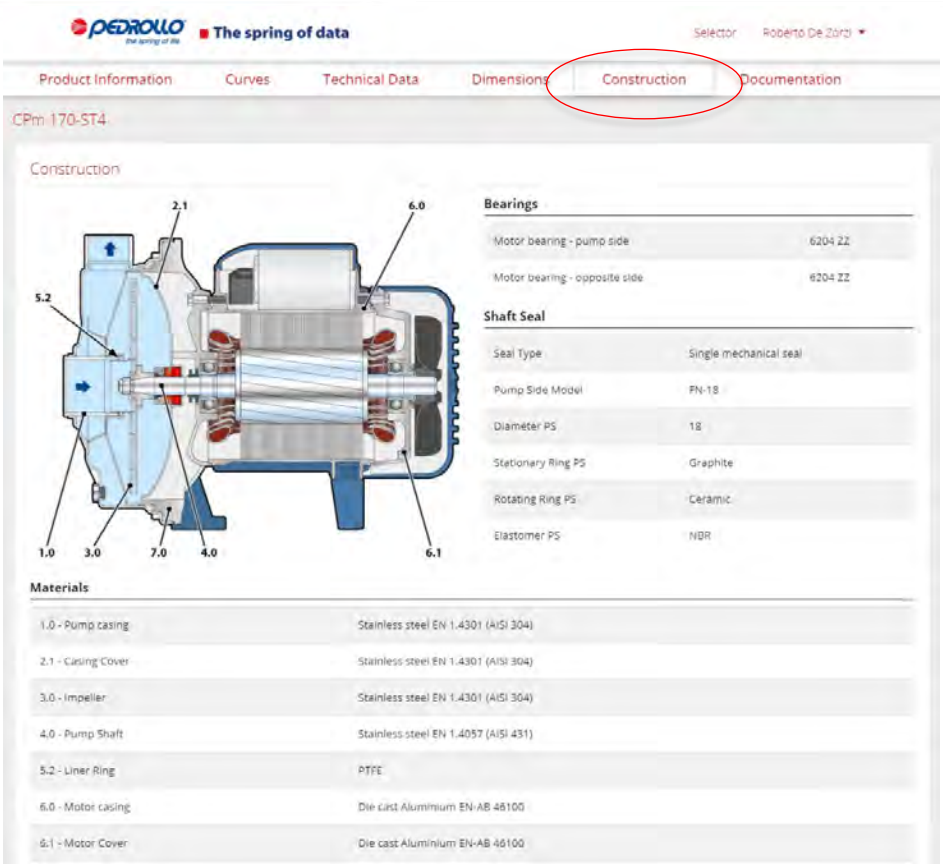
Dimensions

Catalog dimensions and weight

When present in the catalog, images of the typical installation are also displayed



10) Product data



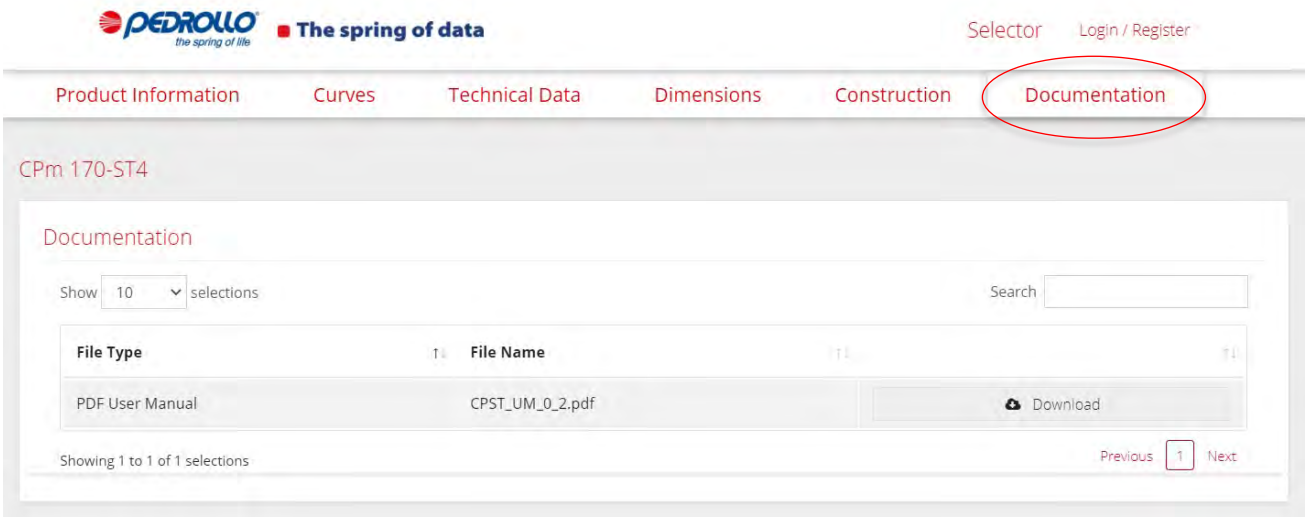
Construction

Information is provided with reference to:

- **Bearings**
- **Shaft seal**
- **Materials for main components.**

10) Product data

Documentation



This is the area where it is possible to download the User Manual (PDF format)

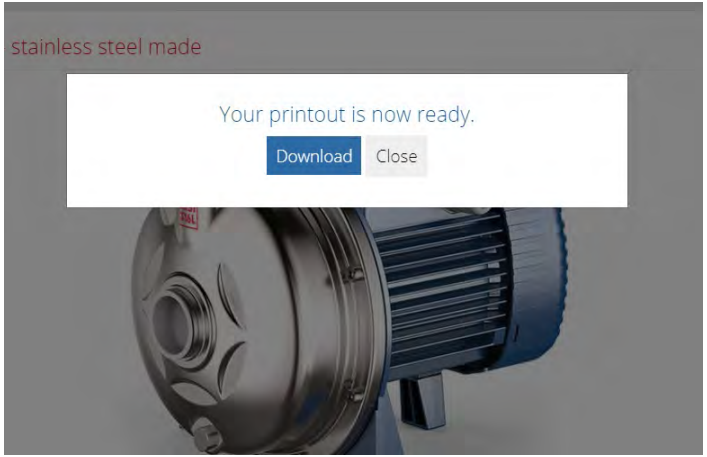
Those who have obtained an higher authorization level will be allowed to download: 2D drawing (DWG format) and 3D drawing (STEP format).

11) Print-out

Data sheet

← This is the button to be selected in order to activate the generation of the Technical Sheet: «print-out» operation.

When ready, by selecting «Download» the PDF file is generated and can be saved.



The data sheet collects the information of the selected product in several pages organized as follows:

- Technical data about product and selection
- Performance charts
- Constructions and Dimensions

The Technical data sheet is generated in the selected language.

Generated Print-out is the most updated status, at that moment, of a product. The product document contains: the date and the string found at the bottom of all pages (Copyright © Pedrollo 2020. All rights reserved. Prepared by "User name" | Version 0/0/1 Rev.0 (123)) which reports the version of the database that produced the document..

11) Print-out

PEDROLLO
the spring of life

CPm 170-ST4

Customer:

Reference:

Code	44CPT70IA1	Uses	Agricultural
Family	CP-ST		Household
Group	Single impeller centrifugal		Industrial
Typology	Surface		

Application limits

Liquid Type	Clean Water
Minimum liquid temperature	-10 °C
Maximum liquid temperature	90 °C
Maximum Chlorine Content	500 ppm
Maximum Sand Content	0 ppm
Manometric suction lift	7 m
Maximum immersion depth	0 m
Maximum Ambient Temperature	40 °C
Minimum Ambient Temperature	-10 °C
Maximum Working Pressure	8 bar

Construction and safety standards

- EN 60335-1, IEC 60335-1
- EN 60034-1, IEC 60034-1
- EU Regolation Nr. 547/2012

Connections

Type of connection	Gas threaded
Size of suction connection	1¼"
Size of delivery connection	1"

Duty Point

Flow rate (actual)	105 l/m
Head (actual)	19.2 m
Pump Efficiency	45.15 %
Overall Efficiency	42.11 %
Pump input power P2	1.31 kW
Motor input power P1	1.56 kW
NPSH	2.15 m

Input Data

Rated flow rate (requested)	100 l/m
Rated head (requested)	18.0 m
System geodetic head	15.0 m
System friction losses	13.0 m
NPSH Available	0.000
Liquid	Water
Temperature	20 °C
Density	998.1 kg/m³
Kinematic Viscosity	1.00 mm²/s
Vapour Pressure	2.316 Pa

Pump nameplate data

Flow rate	10 - 140 l/min
Head	40 - 20 m
Maximum head	41 m
Maximum head	20 m
Minimum Efficiency Index	MEI≥0.40

Other Pump Data

Max Sound Pressure Level (1 m)	64 dBA
Horizontal installation	
Solids free passage	0 mm

Motor nameplate data

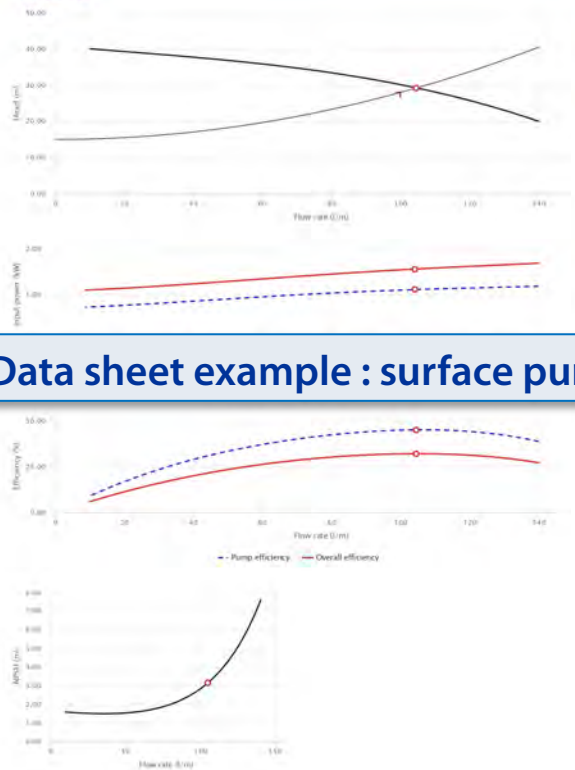
Voltage	220-230 V
Phases	1
Frequency	50 Hz
Rotation Speed	2900 rpm
Rated output power	1.1 kW
Rated Current	7.8 A
Input power P1	1.6 kW
Efficiency grade	Undefined
Capacitor	25 µF
Capacitor Voltage	450 V
Insulation Class	F
Enclosure class IP	X4

Other Motor Data

Starting/Rated Current	2.654
Max No. Starts Per Hour	20
Service Factor	-
Cos Φ (4/4)	-
Efficiency (4/4)	-
Thermal Protection	Thermally Protec
Plug Type	-
Minimum flow rate for motor cooling	0 l/min
Minimum submersion for S1 duty	0 mm

CPm 170-ST4 Date: 14/03/20

Performance



Data sheet example : surface pump

CPm 170-ST4 Date: 14/03/2021

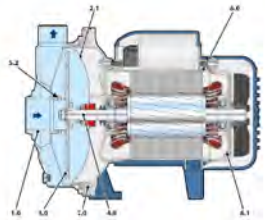
Construction

Bearings

Motor bearing - pump side	6204 ZZ
Motor bearing - opposite side	6204 ZZ

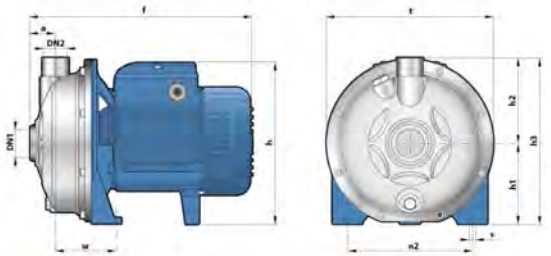
Shaft Seal

Seal Type	Single mechanical seal
Pump Side Model	FN-18
Diameter PS	18
Stationary Ring PS	Graphite
Rotating Ring PS	Ceramic
Elastomer PS	NBR



Materials

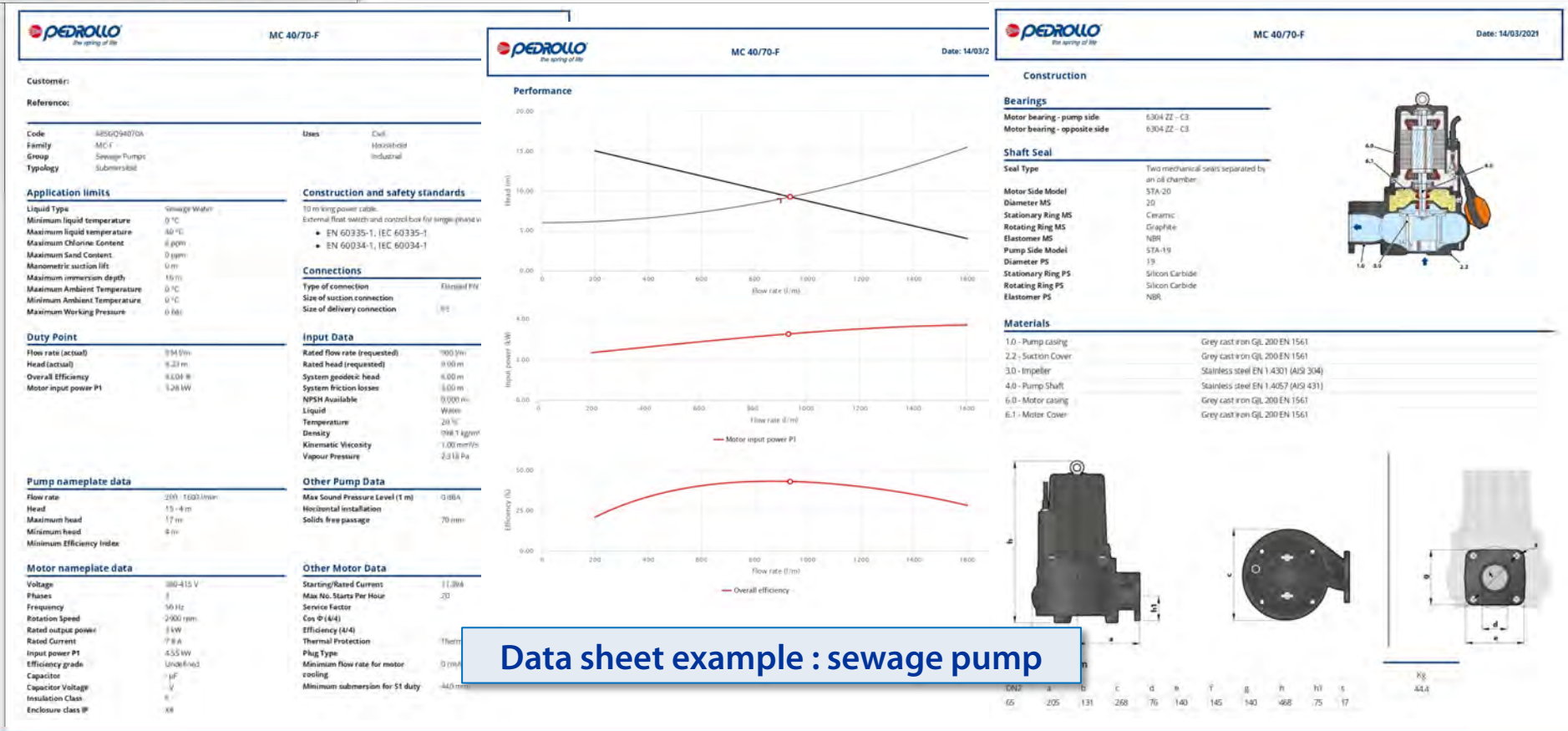
1.0 - Pump casing	Stainless steel EN 1.4301 (AISI 304)
2.1 - Casing Cover	Stainless steel EN 1.4301 (AISI 304)
3.0 - Impeller	Stainless steel EN 1.4301 (AISI 304)
4.0 - Pump Shaft	Stainless steel EN 1.4057 (AISI 431)
	PTFE
	Die cast Aluminium EN-AB 46100
	Die cast Aluminium EN-AB 46100
	Die cast Aluminium EN-AB 46100



Dimensions mm

DN1	DN2	a	f	h	h1	h2	h3	n2	s	t	w	Kg
1¼"	1"	33.5	368	251	120	117.5	237.5	180	11	245	86.5	14

11) Print-out



MC 40/70-F

Customer:

Reference:

Code	48SGQ94070A	Uses	Civil
Family	MC-F		Monobloc
Group	Sewage Pumps		Industrial
Typology	Submersible		

Application limits

Liquid Type	Sewage Water
Minimum liquid temperature	0 °C
Maximum liquid temperature	40 °C
Maximum Chlorine Content	6 ppm
Maximum Sand Content	0 g/m³
Manometric suction lift	0 m
Maximum immersion depth	15 m
Maximum Ambient Temperature	0 °C
Minimum Ambient Temperature	0 °C
Maximum Working Pressure	0 Bar

Construction and safety standards

10 m long power cable.
External float switch and control box for single-phase v

- EN 60335-1, IEC 60335-1
- EN 60034-1, IEC 60034-1

Duty Point

Flow rate (actual)	0 l/s
Head (actual)	0.23 m
Overall Efficiency	0.00 %
Motor input power P1	0.28 kW

Connections

Type of connection	Flanged PN
Size of suction connection	
Size of delivery connection	

Input Data

Rated flow rate (requested)	900 l/m
Rated head (requested)	9.00 m
System geodetic head	6.00 m
System friction losses	3.00 m
NPSH Available	0.000 m
Liquid	Water
Temperature	20 °C
Density	998.1 kg/m³
Kinematic Viscosity	1.00 mm²/s
Vapour Pressure	2.318 Pa

Pump nameplate data

Flow rate	200 - 1600 l/min
Head	15 - 4 m
Maximum head	17 m
Minimum head	6 m
Minimum Efficiency Index	

Other Pump Data

Max Sound Pressure Level (1 m)	0 dBA
Horizontal installation	
Solids free passage	70 mm

Motor nameplate data

Voltage	380-415 V
Phases	3
Frequency	50 Hz
Rotation Speed	2900 rpm
Rated output power	1 kW
Rated Current	2.8 A
Input power P1	4.55 kW
Efficiency grade	Undefined
Capacitor	- µF
Capacitor Voltage	- V
Insulation Class	F
Enclosure class IP	X8

Other Motor Data

Starting/Rated Current	11.2/4
Max No. Starts Per Hour	20
Service Factor	
Cos Φ (4/4)	
Efficiency (4/4)	
Thermal Protection	Therm
Plug Type	
Minimum flow rate for motor cooling	0 m/s
Minimum submersion for S1 duty	4.0 m

MC 40/70-F Date: 14/03/2

Performance

MC 40/70-F Date: 14/03/2021

Construction

Bearings

Motor bearing - pump side	6304 ZZ - C3
Motor bearing - opposite side	6304 ZZ - C3

Shaft Seal

Seal Type	Two mechanical seals separated by an oil chamber
Motor Side Model	STA-20
Diameter MS	20
Stationary Ring MS	Ceramic
Rotating Ring MS	Graphite
Elastomer MS	NBR
Pump Side Model	STA-19
Diameter PS	19
Stationary Ring PS	Silicon Carbide
Rotating Ring PS	Silicon Carbide
Elastomer PS	NBR

Materials

1.0 - Pump casing	Grey cast iron GJL 200 EN 1561
2.2 - Suction Cover	Grey cast iron GJL 200 EN 1561
3.0 - Impeller	Stainless steel EN 1.4301 (AISI 304)
4.0 - Pump Shaft	Stainless steel EN 1.4057 (AISI 431)
6.0 - Motor casing	Grey cast iron GJL 200 EN 1561
6.1 - Motor Cover	Grey cast iron GJL 200 EN 1561

DN2	a	b	c	d	e	f	g	h	h1	s
65	205	131	268	76	140	145	140	468	75	17

Kg
44.4

Data sheet example : sewage pump