



ID-SpecLarge V2.0

*Software for Electrical Distribution Installation
Design in Industrial and Tertiary Buildings
“ Part of of Schneider Electric
software series for Designers”*

Schneider
Electric

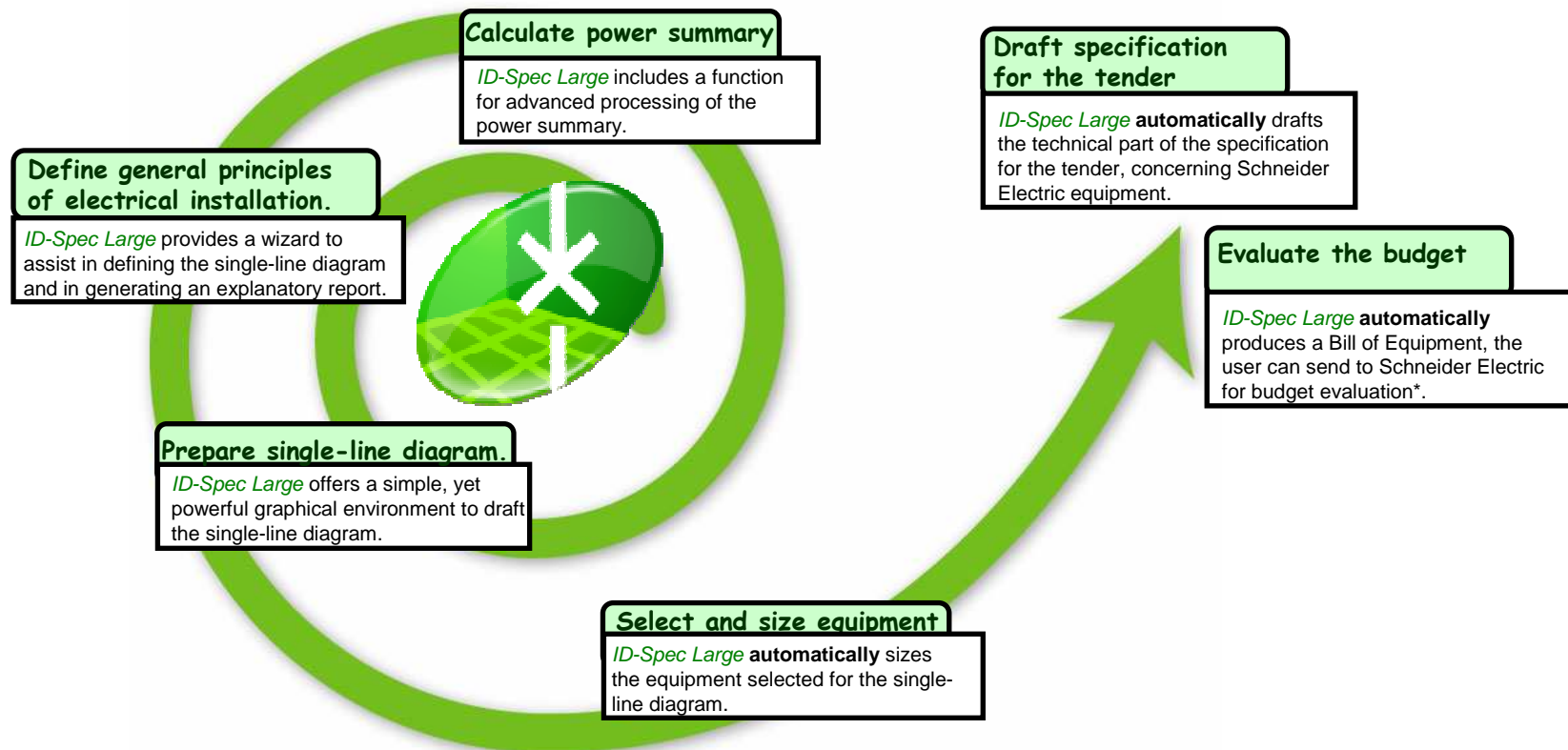


ID-Spec Large boosts your performance in electrical distribution design :

- by increasing your speed,

- by assuring the quality of your process.

ID-Spec Large boosts your performance in each of the tasks and iterations of electrical distribution design.



* Please check that this budget evaluation service is available in your country

ID-Spec Large main benefits

- **The speed to complete your design and manage its iterations** thanks to automation of:

- equipment choice and sizing,
- production of the technical sheets of equipment for the call for tender specification,
- production of the detailed bill of equipment for budget evaluation (this evaluation can be provided by your Schneider Electric representative)

- **The assurance of the quality of your design process all through the several iterations**

thanks to the automatic management of the consistency of all the design elements: power assessment, single line diagram, equipment selection and sizing, technical sheets of equipment for the call for tender specification.

- **The strengthening of your top-class professional image**

thanks to the quality of the produced documents (substantiated report which presents the electrical distribution principles selected, technical sheets of equipment for the call for tender specification)

ID-Spec Large includes ID-Spec and ID-Spec Plus

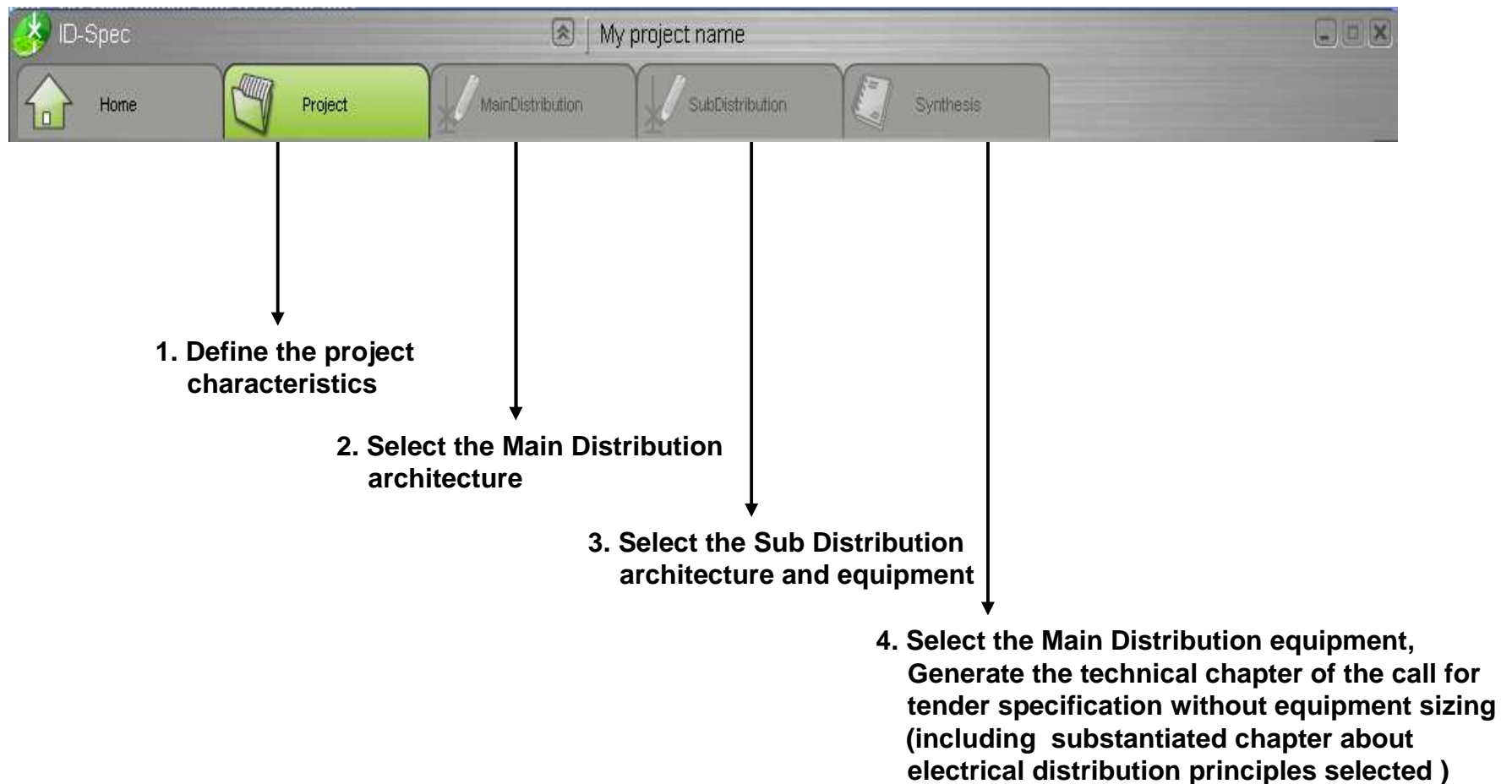
ID-Spec directed at the task:
“Define the general principles of electrical installation” and presentation in a substantiated report for your customer

ID-Spec Plus directed at the tasks:

- Calculate the power summary,
- Prepare the single line diagram,
- Select and size the equipment,
- Draft the specification for the tender
- Evaluate the budget



ID-Spec allows you to define electrical distribution principles in 4 steps and to present it to your customer in a substantiated report



Step 1 : Define the project characteristics

1. Select the kind of site associated to the Electrical Distribution under design

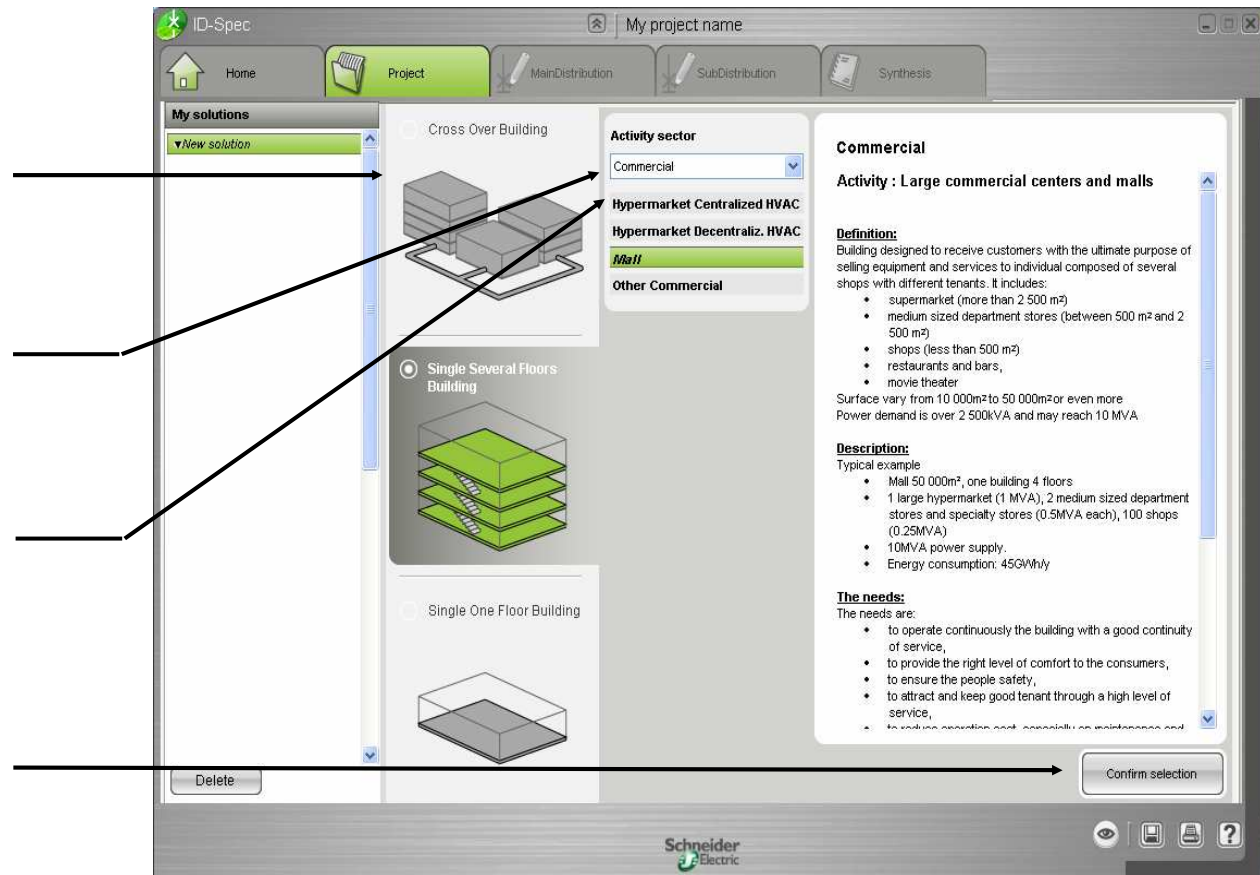
2. Select the activity sector

3. Select the activity

The activity description is then displayed on the right part of the screen

4. Confirm the selections

The selected characteristics are then listed in the tree view on the left part of the screen and the next thumb is displayed



Step 2: Select the Main Distribution architecture

1. Define the Upstream connection parameters

2. Define the Site parameters

The relevant main distribution architecture are then displayed below the green arrow

3. View the proposed architecture and select one of them

By selecting one of the proposed architectures, display associated description and recommendations on the right part of the screen. After viewing all, select the most relevant, from your point of view.

4. Confirm the selections

The screenshot displays the ID-Spec software interface for selecting a Main Distribution architecture. The interface is divided into several sections:

- My solutions:** A list of solutions including "New solution", "Single Several Floors Building", and "Mall". A green arrow points to the "New solution" entry.
- Upstream connection:** Parameters for the upstream connection, including "Connected to" (Utility), "Connection scheme" (Single Line), and "Service reliability" (Standard).
- Site parameters:** Parameters for the site, including "Power demand" (1250 kVA \leq 2500 kVA) and "Floor Number" (≤ 5).
- Proposed architectures:** A list of proposed architectures, including "1 Subst- N TransfoNO- Central.", "1 Subst- N TransfoNC- Central.", and "1 Subst- 1 Transfo- Centr Dist". A green arrow points to the "1 Subst- N TransfoNO- Central." option.
- Single-line diagram pattern:** A diagram showing a transformer connected to a busbar, which is then connected to a distribution busbar with multiple outlets.
- 1 Subst- N TransfoNO- Central.:** A detailed description of the selected architecture, including "1 Substation - N Transformers - Normally Open Connection - Centralized rising".
- Usual characteristics:** A bar chart showing "Inst. power field (kVA)" and "Project floor N°". The "Inst. power field (kVA)" bar is at 10,000 and the "Project floor N°" bar is at 800.
- Reliability and Technicity:** A bar chart showing "Reliability" and "Technicity" levels. The "Reliability" bar is at High and the "Technicity" bar is at Medium.
- Installed power:** A note stating "The installed power is usually greater than 1250 kVA. But this solution can be used for smaller installed power in case of:".
- Buttons:** "Delete" and "Confirm selection" buttons are located at the bottom of the interface.

Step 3a: Select the Sub Distribution architecture

ID-Spec proposes:

- a pre defined list of circuits,
- pre defined settings for the characteristics of these circuits according to the activity selected

1. If necessary, modify the circuit list by (bottom buttons)

- selecting the circuit and deleting or renaming it
- adding new circuit

2. For each circuit:

2a. Click on the circuit thumb

2b. Check and if necessary modify circuit characteristics

relevant architecture proposals are then listed below green arrow

2c. View the proposals for the circuit architecture

2d. Move to circuit technology selection

The screenshot shows the ID-Spec software interface for configuring a sub-distribution system. The main window is titled 'My project name' and has tabs for 'Home', 'Project', 'MainDistribution', 'SubDistribution', and 'Synthesis'. The 'SubDistribution' tab is active. On the left, a 'My solutions' list shows a 'New solution' selected, with details like 'Single Several Floors Building', 'Mall', 'Utility', 'Single Line connection', 'Standard (en) Energy Availability', 'Power demand 1260 kVA < ≤ 2600 kVA', 'Floor Number ≤ 5', and '1 Subst- N TransfoNO Central.'. Below this list are 'Delete', 'Add...', and 'Rename' buttons. In the center, a 'Mall' category is expanded to show 'Large shops' as the selected circuit. Other options include 'Mall HVAC distribution', 'Mall HVAC production', 'Lighting', 'Medium shops', and 'Small shops'. To the right of the circuit list is the 'Circuit characteristics' panel, which includes settings for 'Flexibility' (No), 'Load distribution' (Localized), 'Interruption sensitivity' (Short Failure Acceptable), and 'Disturbance sensitivity' (Medium). Below these are 'Double connection required' (False) and 'Default values' buttons. A 'One-line diagram proposal' section shows 'Centralized' as the selected distribution principle, with 'Radial' and 'Distributed' as alternatives. Other options include 'Sheddab', 'Double Connect', 'Backup power supply', 'LV Generator', and 'UPS'. A 'Technology' dropdown menu is at the bottom of this panel. On the far right, a 'Centralized' layout diagram shows a star connection with six consumers. Below the diagram is a 'Description' section explaining the centralized layout and a 'Recommendations' section with bullet points: 'Centralized Layout is recommended when: Installation flexibility is low, Load distribution is localized: high unit power loads, non-uniform.' A 'Confirm selection' button is at the bottom right. The Schneider Electric logo is in the bottom right corner.

Step 3b: Select the Sub Distribution equipment

2. For each circuit (continuation):

2e. Check and if necessary modify additional circuit characteristics

The relevant requirements on equipment are then displayed below the green arrow

2f. Select the offer you want to specify for this circuit

It is possible to select several offers.

It is possible to have more information about one offer, by clicking on the zoom in the right bottom corner of the offer label

Then click on the next circuit thumb.
(It resumes the 2a step for this next circuit)

3. Confirm the selections done for all the circuits

The screenshot shows the ID-Spec software interface for selecting sub-distribution equipment. The interface is divided into several sections:

- Navigation:** Home, Project, MainDistribution, SubDistribution (active), Synthesis.
- My solutions:** A list of solutions including 'New solution', 'Single Several Floors Building', 'Mall', 'Utility', 'Single Line connection', 'Standard (en) Energy Availability', 'Power demand 1250 kVA < ≤ 2500 kVA', 'Floor Number ≤ 5', 'Subst- N transfoNO- Central', and 'Large shops'.
- Mall:** A category selection area with sub-categories: 'Large shops', 'Mall HVAC distribution', 'Mall HVAC production', 'Lighting', 'Medium shops', and 'Small shops'.
- Circuit characteristics:** A section with dropdown menus for 'Flexibility' (No), 'Load distribution' (Localised), 'Environment' (Standard), and 'Maintainability' (Standard). A green arrow points down from this section to the equipment requirements.
- Proposed equipment:** A section showing two equipment options: 'Prisma Plus G' and 'Prisma Plus P'. The 'Prisma Plus P' option is selected with a green checkmark. Technical specifications for each are listed.
- Equipment requirements:** A table for 'LV Switchboard' with the following data:

Service indicator	121
Withdrawability	FFF
Form	1
IP	30
IK	07
- Buttons:** 'Delete', 'Delete...', 'Add...', 'Rename', and 'Confirm selection'.

Step 4a: Select the Main Distribution equipment

In the Main Distribution sub-thumb

1. Select the offer you want to specify for each equipment of the single line diagram

It is possible to select several offers for one equipment.
It is possible to have more information about one offer, by clicking on the zoom in the right bottom corner of the offer label

2. Click on the Sub Distribution sub thumb

The screenshot shows the ID-Spec software interface. At the top, there is a navigation bar with tabs for 'Home', 'Project', 'MainDistribution', 'SubDistribution', and 'Synthesis'. Below this, there is a sub-thumb area with 'Main Distribution' selected. The main area is divided into three sections: 'My solutions' on the left, 'Main distribution one line diagram pattern' in the center, and 'Proposed equipment' on the right. The 'My solutions' list includes various building types and equipment. The 'Main distribution one line diagram pattern' shows a schematic diagram of a main distribution unit. The 'Proposed equipment' list includes 'SM6', 'Trihal', 'Minera', and 'Prisma Plus P'. The 'SM6' offer is selected, indicated by a checkmark and a zoom icon. The 'Minera' offer is also selected. The 'Trihal' and 'Prisma Plus P' offers are not selected. The 'Delete' button is at the bottom left, and the 'End solution' button is at the bottom right. The Schneider Electric logo is at the bottom center.

Step 4b: View the sub distribution summary

In the Sub Distribution sub-thumb

1. View the sub distribution summary

It summarizes for each circuit the one line diagram recommended, the equipment requirements, and the proposed offer.

You can select the column and rank the lines.

2. Click on the Report sub thumb

The screenshot shows the ID-Spec software interface. The navigation bar at the top includes 'Home', 'Project', 'MainDistribution', 'SubDistribution', and 'Synthesis'. The 'Sub Distribution' tab is active, and the 'Report' sub-thumb is highlighted. The 'My solutions' list on the left includes 'New solution', 'Single Several Floors Building', 'Mall', 'Utility', 'Single Line connection', 'Standard (en) Energy Availability', 'Power demand 1250 kVA < s 2500 kVA', 'Floor Number s 5', '1 Subst- N TransfoNO- Central...', 'Large shops', 'Mall HVAC distribution', 'Mall HVAC production', 'Lighting', 'Medium shops', and 'Small shops'. The 'Busbar trunking system (BTS) connection' table has columns: 'Distributi...', 'LV config', 'Backup', 'UPS', 'IP', 'IK', and 'Proposed equipments'. The 'LV switchboard connection' table has columns: 'Distributi...', 'LV config', 'Backup', 'UPS', 'IP', 'IK', 'Withdra...', 'Form', 'Service ...', and 'Proposed equipments'. The Schneider Electric logo is visible at the bottom right.

	Distributi...	LV config	Backup	UPS	IP	IK	Proposed equipments
Mall HVAC distrib...	Distributed	Radial	No Generator	No UPS	30	07	KSA;KNA;KB
Lighting	Distributed	Radial	LV Generator	No UPS	30	07	KSA;KNA;KB
Small shops	Distributed	Radial	LV Generator	No UPS	30	07	KSA;KNA;KB

	Distributi...	LV config	Backup	UPS	IP	IK	Withdra...	Form	Service ...	Proposed equipments
Large shops	Centralized	Radial	LV Generator	No U...	30	07	FFF	1	121	Prisma Plus G;Prisma Plus P
Mall HVAC produ...	Centralized	Radial	LV Generator	No U...	30	07	FFF	1	121	Prisma Plus G;Prisma Plus P
Medium shops	Centralized	Radial	LV Generator	No U...	30	07	FFF	1	121	Prisma Plus G;Prisma Plus P

Step 4c: Generate the report for your customer

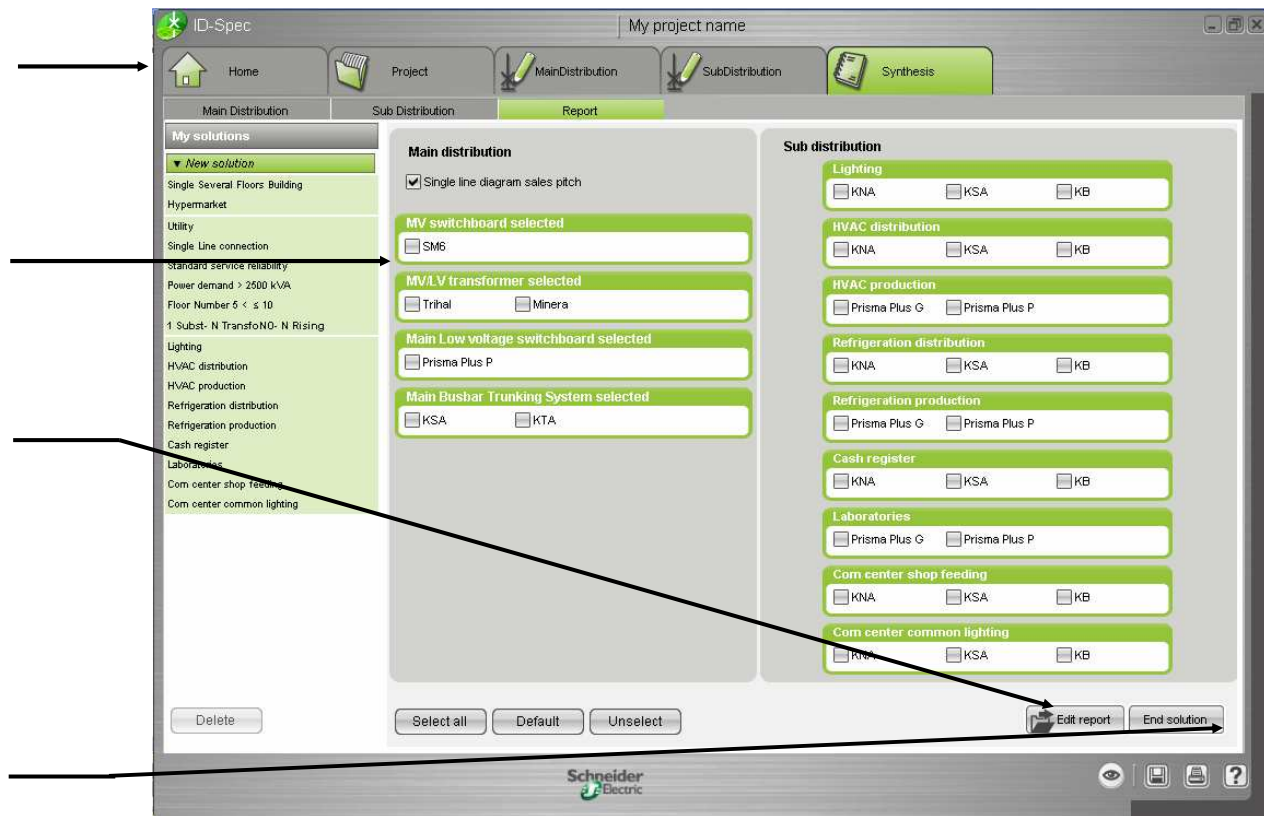
In the Report sub-thumb:

1. Select additional equipment if necessary

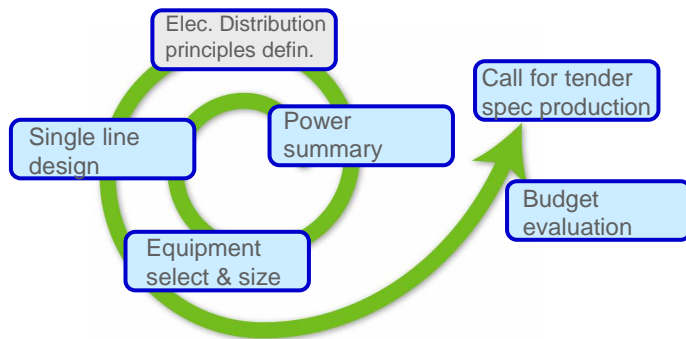
2. Edit report

3. End the solution

You will be asked about the name you want to give to the solution



ID-Spec Plus offers a multi-areas environment to support the different design tasks in a consistent and ergonomic way



Graphical area

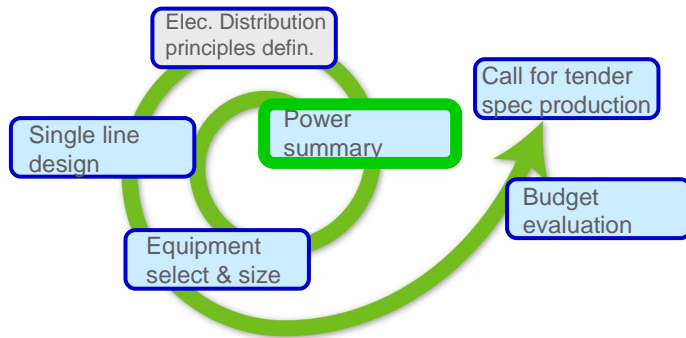
Equipment

Name	Range	Rating (A)	low (kA)	IP	IK	Form	Nbr feeders
TGBT01	PrismaPlus system P	1600	85	30	07	2	2

Installed power : 3255 kVA Expanded power : 1898 kVA

Spreadsheet area

Text visualization area

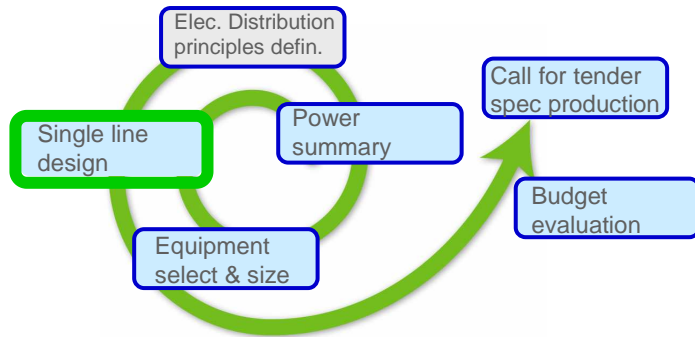


ID-Spec Plus: Power summary

In the **Load** thumb


1. Define the loads to feed
They are, then, automatically :
 - created in the **Graphical** area
 - integrated in the **Power balance** table
2. Then you can in this thumb work your **power assessment**:
sort and filter loads according to their different characteristics (electrical and customized criteria)

Name	Type	S (kVA)	P (kW)	Cos phi	Number	Ku	Polarity	Interruption sensitivity	Upgradability	Parameter 1	Parameter 2
Eau glacée proc...	Process Utility	179	152.2	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Locaux techniques	Process
Déchets	Process Utility	294	249.9	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Locaux techniques	Process
Compresseur	Process Utility	206	175.1	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Locaux techniques	Process
Eau glacée bure...	HVAC	71	60.4	0.85	1	1	3 Ph + N	Sheddable	None	Locaux techniques	Bâtiment
RT1	HVAC	118	100.3	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Zone Atelier	Bâtiment
RT2	HVAC	94	79.9	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Zone Atelier	Bâtiment
RT3	HVAC	94	79.9	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Zone Atelier	Bâtiment
RT4	HVAC	45	38.2	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Zone Atelier	Bâtiment
RT5	HVAC	45	38.2	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Zone Atelier	Bâtiment
RT6	HVAC	45	38.2	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Zone Atelier	Bâtiment
RT7	HVAC	94	79.9	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Zone Atelier	Bâtiment
RT8	HVAC	94	79.9	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Zone Atelier	Bâtiment
RT9	HVAC	94	79.9	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Zone Atelier	Bâtiment
Divers mainten...	Other	40	32	0.8	1	1	3 Ph + N	Long Interruption Acceptable	None	Zone Atelier	Process
Outils mainten...	Motion	62	59.7	0.85	1	1	3 Ph + N	Long Interruption Acceptable	None	Zone Atelier	Process
Locaux sociaux	Other	20	16	0.8	1	1	3 Ph + N	Sheddable	None	Zones annexes	Bâtiment
Réfectoire	Other	20	16	0.8	1	1	3 Ph + N	Sheddable	None	Zones annexes	Bâtiment
Bureaux ét. 1	Other	60	48	0.8	1	1	3 Ph + N	Long Interruption Acceptable	None	Zones annexes	Bâtiment
Bureaux ét. 2	Other	60	48	0.8	1	1	3 Ph + N	Sheddable	None	Zones annexes	Bâtiment
Total		3255.5	2763.8								

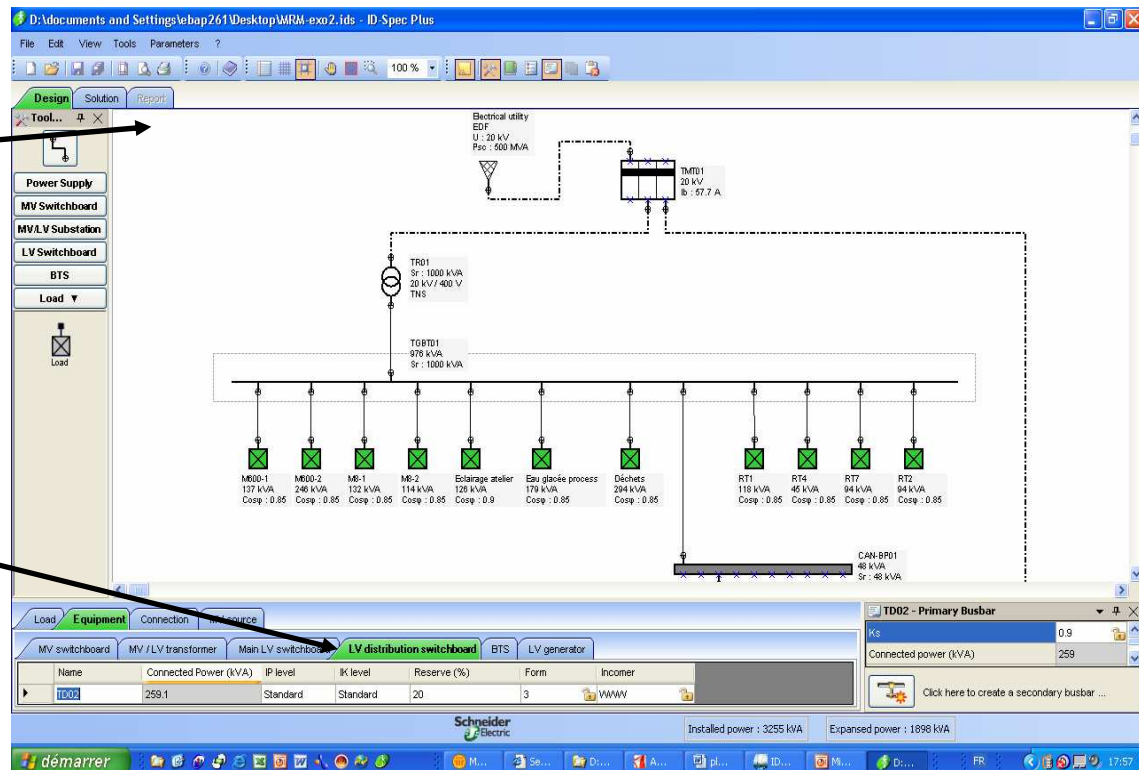


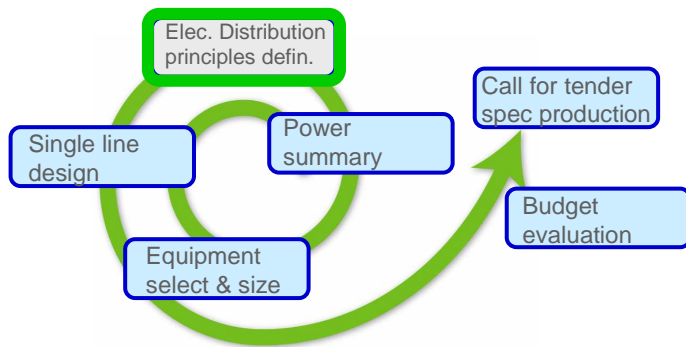
ID-Spec Plus: Single line diagram design

In the **Graphical** area, draw the single line diagram using the tool bar located on the left

1. Select and drop the equipment
2. Connect them thanks to the **connection tool** 

3. Modify, if necessary, the single line diagram components properties





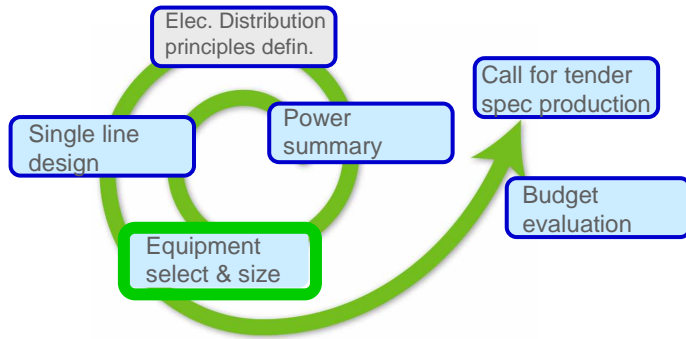
ID-Spec Plus: Single line diagram design

At any time you can run ID-Spec (assistant for electrical distribution principle definition)

- to see the result of a study previously done with ID-Spec,
- to have assistance for electrical distribution principle definition

Name	Type	Utility	Un (kV)	Psc (MVA)	Connection diagram	Max: power (MVA)
PS01	Electrical utility	EDF	20	250	Extensible single line	

ID-Spec Plus: Equipment selection and sizing



Click on the **Solution** thumb

- then, ID-Spec Plus automatically selects and sizes, each equipment
- By pointing an equipment in the graphical area, you can:
 - in the **Equipment** thumb, see and possibly modify the selection done by ID-Spec Plus
 - in the **Solution** area, see the equipment specification

The screenshot shows the ID-Spec Plus software interface. The main window displays a graphical diagram of an electrical system with components like RD01, TR01, and TGBT01. The **Solution** thumb is active, showing a detailed specification for the **Switchboard TGBT01**.

Equipment of type: Prisma Plus System P

Environment

- Altitude: ≤ 2000m
- Ambient temperature: standard
- Average ambient temperature over a period of 24h: 35°C
- Relative humidity: standard (80% - 35°C)
- Climatic ambience: standard

Electrical requirements

- Rated Voltage: 400 V
- Frequency: 50 Hz
- Rated current: 1600 A
- Icw: 85 kA
- Earthing system Main Busbar: TNS

Switchboard design requirements

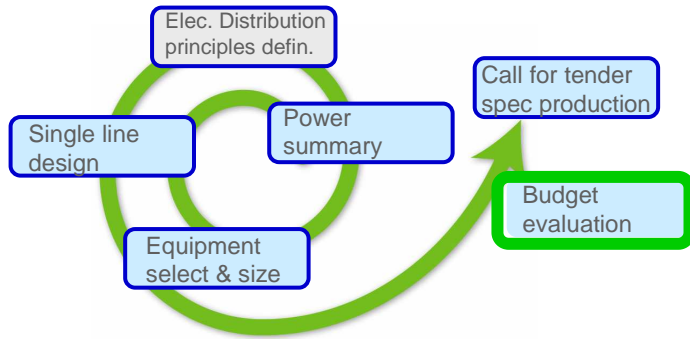
Enclosures

- Degree of protection IP: 30
- Degree of mechanical protection IK: 07
- Form: 2 - For safety reasons and especially when the door is during switchboard operation, all busbars must be covered by barriers over the whole perimeter of the busbar zone.
- Painting: standard RAL 9001
- Door: with locking (key RONIS n° 405)

Equipment Connection

Name	Range	Rating (A)	Icw (kA)	IP	IK	Form	Nbr feeders <1
TGBT01	PrismaPlus system P	1600	85	30	07	2	2

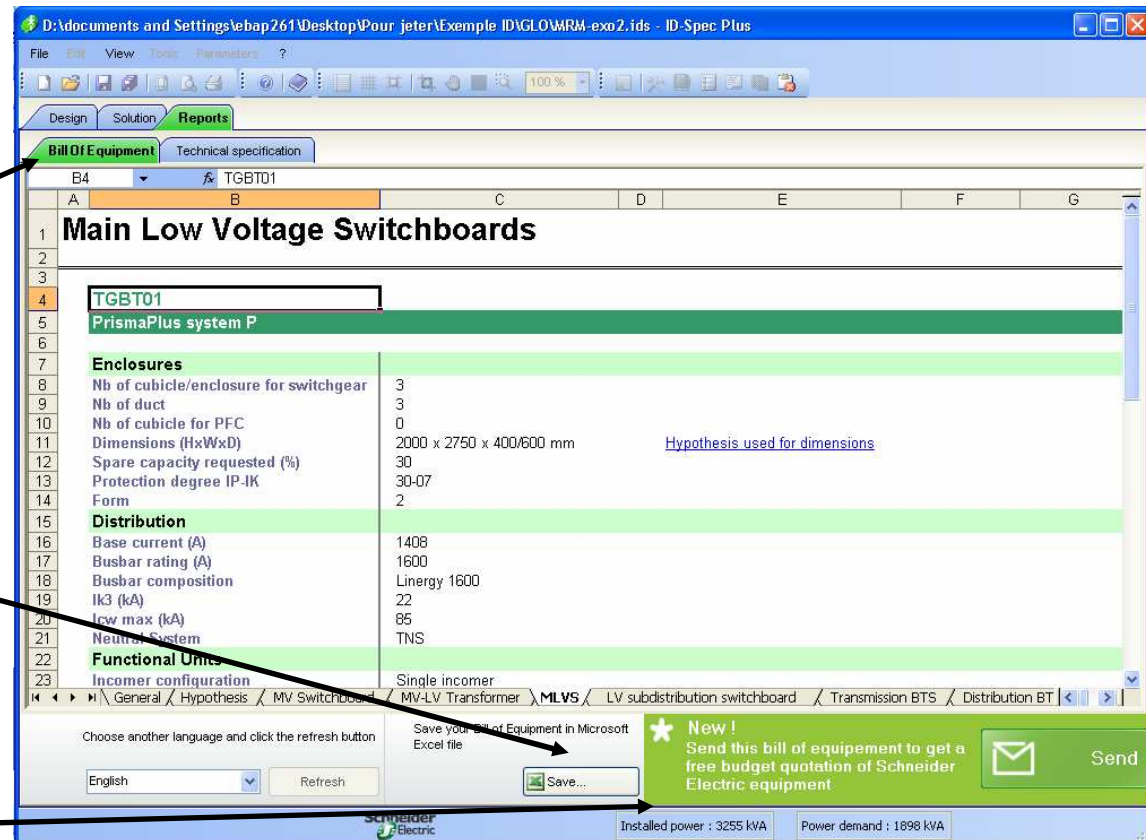
Installed power: 3255 kVA Expanded power: 1898 kVA

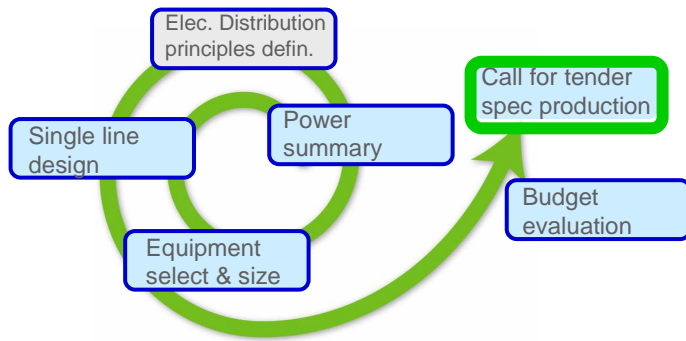


ID-Spec Plus: Automatic production of the bill of equipment for budget evaluation

Click on the **Reports** thumb, **Bill of Equipment** sub-thumb

- ID-Spec Plus creates then automatically the bill of equipment .
- you can **Save** this document in .xls format
- If the function is available in your country, you can send the bill of equipment to Schneider Electric for quotation





ID-Spec Plus: Automatic production of the technical sheets of equipment for the call for tender specification

Click on the **Reports** thumb, **Technical specification** sub-thumb

- ID-Spec Plus creates then automatically the single line diagram and the technical sheets of equipment for the call for tender specification .
- you can **Save** this document in **.doc** format

