



# RDS-PP Wizard

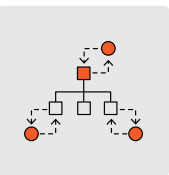
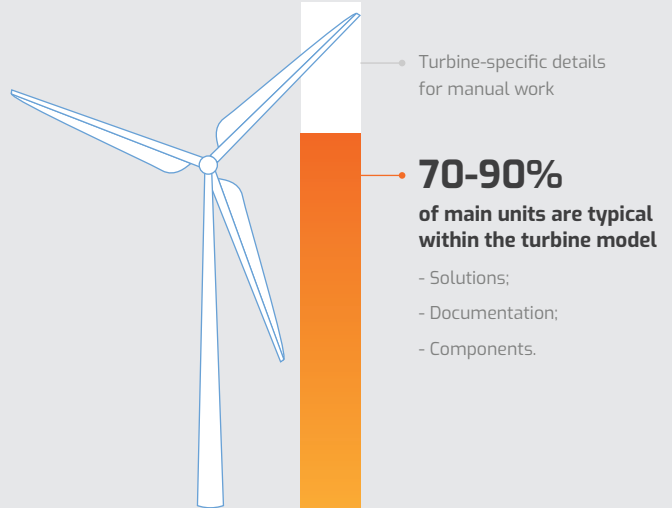
Smart Assignment of RDS-PP Codes

## RDS-PP Wizard Approach

Around **70-90%** of all turbine main units are repetitive within the turbine model. Therefore, it is possible to decrease manual work by up to **60%\***.

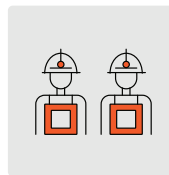
In Keel, we've been working with wind turbines for many years. In 2020, we reached a milestone of implementing the RDS-PP standard for around 10 000 wind turbines. Over these years, we have been gathering the statistics and data into a library that now allows us to efficiently re-use standard solutions and apply them to the components that are typical within many model types.

\* Provided there is a ready library of elements.



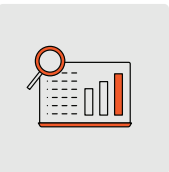
### Flexible Structure Update

Easily update and/or implement new approaches during asset lifecycle management.



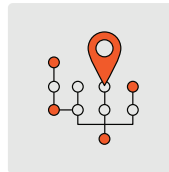
### Accessibility for Every Specialist

Speak the same language with other specialists while working with RDS-PP.



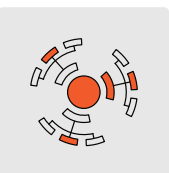
### Qualified CMMS Management

Make correct and timely decisions, organize CMMS processes and evaluate the turbine safety.



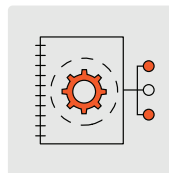
### Traceability of Function Codes

Transparent process governance during the structure building.



### Standardized Solutions

Re-use previously gathered and checked data.



### Better Accountability

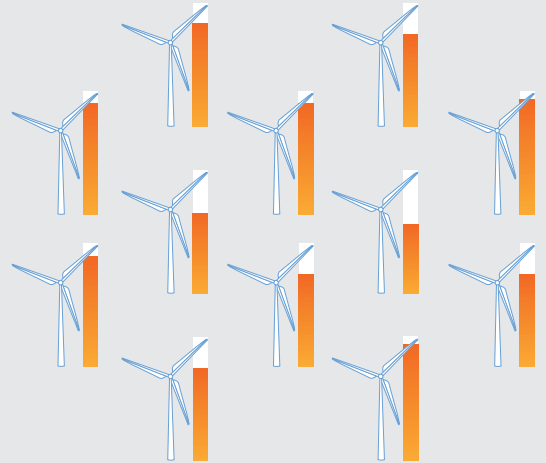
Each report is easily created and based on solid evidence.

## RDS-PP Vision

RDS-PP code represents certain functions of products within a Turbine.

Even when there are design differences, one code is always attached to the same function in different turbine models. This consistency helps to quickly track and report maintenance issues on the RDS-PP code level.

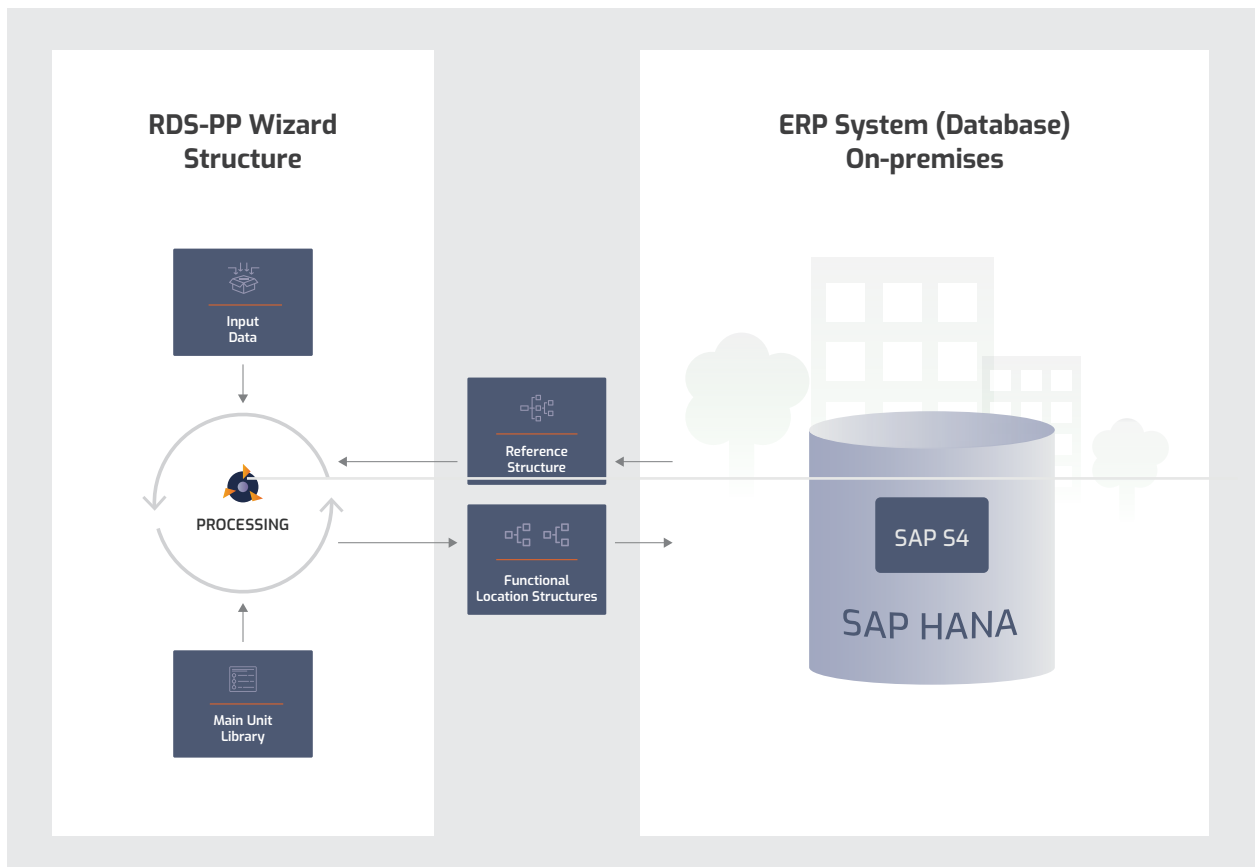
Owing to its simultaneous availability to technicians, manufacturers, designers and engineers, the team can communicate more effectively and base their actions on the same data.



## RDS-PP Implementation Made Simple

RDS-PP Wizard is a web application capable of building an asset structure using solutions typical for the standard turbine components.

Over 1000 standard solutions were consolidated into a library. This allows automizing 60% of the manual work.



## Reference Structure

RDS-PP Wizard automatically generates a Reference structure with all possible turbine component variations. This allows to select the relevant codes based on the specific wind turbine configuration.

## Main Unit Library

Main Unit Library contains all variations of main components as well as corresponding RDS-PP codes that were once already applied to other turbines of the same type.

| Func. location              | Func. loc. description                   | Status | Turt | Section                  | Main unit class               | Class description                | Count                                    | Flag                     |   |  |
|-----------------------------|--|--------|------|--------------------------|-------------------------------|----------------------------------|--|--------------------------|---|--|
| KL0001-001                  | WT#(T00) Wind park name*(Turbine Ser...  | Exist  | G4   | ELECTRICAL SPECIFICATION | BFA11UC001                    | Main Switchgear                  | 5  |                          |   |  |
| KL0001-001-B                | EI Auxiliary Power Supply System         | Create | G4   |                          | BFA11UC002                    | Switchgear, Tower Base           | 7  |                          |   |  |
| KL0001-001-BF               | Low Voltage Electrical Main Supply Sys   | Create | G4   |                          | BFA11UC003                    | Control Panel Nacelle            | 9  |                          |   |  |
| KL0001-001-BFA              | Low Voltage Electrical Main Supply Sys   | Create | G4   |                          | BFA11UC021                    | Control Panel, Tower Base        | 7  |                          |   |  |
| KL0001-001-BFA11            | Low Voltage Electrical Main Supply Sys   | Create | G4   |                          | MDA10UC006                    | Control Cabinet, Pitch Hyd, Hub  | 13                                       |                          |   |  |
| KL0001-001-BFA11BR021       | Smoke Monitoring, Swgr, Tower Base       | Create | G4   |                          | MDL10UC018                    | Converter Cabinet, Yaw Drives    | 6  |                          |   |  |
| KL0001-001-BFA11BR031       | Smoke Monitoring, Swgr, Nacelle          | Create | G4   |                          | MSE11UC012                    | Switchboard, Frequency Converter | 13                                       |                          |   |  |
| KL0001-001-BFA11BT021       | Temperature, Switchgear, Tower Base      | Create | G4   |                          | MSE11UC101                    | Power Unit                       | 0  |                          |   |  |
| KL0001-001-BFA11BT031       | Temperature, Switchgear, Nacelle         | Create | G4   |                          | MSE41UC001                    | Panel, VFD, Cooling Fan          | 0  |                          |   |  |
| KL0001-001-BFA11EA001       | Lighting Nacelle                         |        | G4   |                          | HUB                           | MDA11MQ001                       | Blade 1, Rotor Blade System              | 0                        |   |  |
| KL0001-001-BFA11EA001-EA001 | Lighting/Emergency Lighting, Nacelle     |        | G4   |                          |                               | MDA11WP001                       | Grease Distribution Block, Blade Bearing | 0                        |   |  |
| KL0001-001-BFA11EA001-SF001 | Switch, Internal Light                   |        | G4   |                          |                               | MDA12MQ001                       | Blade 2, Rotor Blade System              | 0                        |   |  |
| KL0001-001-BFA11EA001-XD019 | Junction Box 1, Lighting, Nacelle        | Create | G4   |                          |                               | MDA12WP001                       | Grease Distribution Block, Blade Bearing | 0                        |   |  |
| KL0001-001-BFA11EA002       | Lighting Tower                           |        | G4   |                          |                               | MDA13MQ001                       | Blade 3, Rotor Blade System              | 0                        |   |  |
| KL0001-001-BFA11EA002-FB001 | RCCB, Light Power Supply                 |        | G4   |                          |                               | MDA13WP001                       | Grease Distribution Block, Blade Bearing | 0                        |   |  |
| KL0001-001-BFA11EA002-FC001 | CB, Light in Nacelle and Tower           |        | G4   |                          |                               | MDA20                            | Rotor Hub Unit                           | 0                        |   |  |
| KL0001-001-BFA11EA021       | Lighting, Tower Top Section              |        | G4   |                          |                               | NACELLE                          | MDK                                      | Drive Train System       | 0 |  |
| KL0001-001-BFA11EA011-EA001 | Lighting/Emergency Lighting, Tower Top   |        | G4   |                          |                               |                                  | MDK30                                    | Brake System Drive Train | 0 |  |
| KL0001-001-BFA11EA011-XD017 | Junction Box 1, Lighting, Tower Top SECT |        | G4   |                          |                               |                                  | MDL10                                    | Yaw Drive System         | 0 |  |
| KL0001-001-BFA11EA012       | Lighting, Tower Middle Section           |        | G4   |                          | MDX                           |                                  | Central Hydraulic System                 | 0                        |   |  |
| KL0001-001-BFA11EA012-EA001 | Lighting/Emergency Lighting, Tower Mid 1 |        | G4   |                          | MDX10                         |                                  | Central Hydraulic System WTG             | 22                       |   |  |
| KL0001-001-BFA11EA029       | Lighting, Tower Bottom                   | Check  | G4   |                          | MKA11GA001                    |                                  | Generator, Power Generation System       | 7                        |   |  |
| KL0001-001-BFA11EA029-EA001 | External Door Light                      |        | G4   |                          | MUD10                         |                                  | Main Frame and Nacelle                   | 55                       |   |  |
| KL0001-001-BFA11EA029-EA002 | External Door Flood Light                |        | G4   | MUD10GP101               | Hydraulic Oil Pump, Hatch HPU | 0                                |  |                          |   |  |
| KL0001-001-BFA11EA029-FB001 | RCCB, External Door and Flood Light      | Create | G4   | TOWER                    | UMD11UM001                    | Segment / Course, Top Section    | 73                                       |                          |   |  |
| KL0001-001-BFA11EA029-FB002 | RCCB, External Door Light                |        | G4   |                          | UMD12UM001                    | Segment / Course, Middle Section | 59                                       |                          |   |  |

FOR MORE INFO  
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