# Flowchart

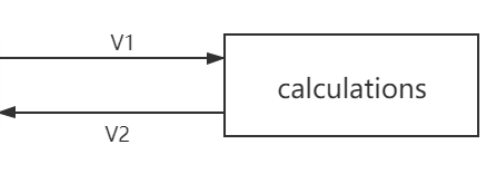


Figure Calculation subsystem flowchart

## Unique identifiers

|  |  |
| --- | --- |
| Unique ID | Long Name |
| V1 | User-interface sub-system output |
| V2 | Calculation sub-system output |

# Table of limits

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Interaction | Symbol | Min. | Max. | Unit |
| -> V1 | | | | |
| Data from user interface sub-system | | | | |
| Limit input | | | | |
| Motor input voltage |  | 0 | 48 | V |
| Properities input (used to set up calculation) | | | | |
| Bearing friction coefficient |  |  |  | - |
| Gear friction coefficient |  | *0.1* | *0.15* | - |
| Gear transmission ratio |  | 0,1 | 10 | # |
| Propeller blade count | - | 2 | 6 | # |
| Propeller diameter |  | 0,1 | 0,5 | m |
| Torque |  | 5 | 30 | Nm |
| Blade coefficient |  | 0 | 1,2 | - |
| Blade pitch | - | 35 | 39 | ° |
| Propeller coefficient |  | 0 | 0,4 |  |
| J | 0 | 0,9 |  |
| -> V2 | | | | |
| Data to user interface sub-system | | | | |
| Limit output | | | | |
| Thrust |  | 0 | 500 | N |
| Rotational speed propeller |  | 0 | 2300 | rpm |
| Power input |  | 0 | 9700 | W |
| Power output |  | 0 | 8500 | W |
| Power loss |  | 0 | 8500 | W |
| Efficiency |  | 0 | 100 | % |

Tip: The range of power input comes from the motor T-N curve provided by the company.