![Revit Modeling India logo]

**REVIT MODELING INDIA**

# PARAMETRIC REVIT FAMILY CREATION
## Case Study



**COMPANY DESCRIPTION:**

Leading Pump Manufacturers of Australia - With an Annual Production Capacity of more than 7 million Pump Units

**INDUSTRY:** Manufacturing

**SERVICES:** Parametric Pump Metric Revit Family Creation

**LOCATION:** Sydney, Australia

www.revitmodelingindia.com

# CHALLENGES

A leading pump manufacturer of Australia wanted to provide their clients with an exclusive library of digital models based on its product catalogue. The intent was to use this library to create custom drawings with better accuracy and system intelligence with a very pressing turnaround time.

A parametric Revit pump models was to be generated with parameterized inputs, analytical model, construction drawings and shop drawings including item schedules which could be used by the project stakeholders throughout the life cycle of a building. Nested families in a single model file were requested for future reuse of the parametric models.

Revit Modeling India was selected as Revit technology partner, a BIM professional services firm with technical expertise in Revit family / content creation services.

**SOLUTIONS:**

Under an aggressive timeline, Revit Modeling India generated these parametric pump Revit families with modifiable suction flange size, discharge flange size, flange connections, motor & Pump dimensions, base dimensions based on data from manufacturer (example shown below).

Our BIM Experts generated families allowing to draw and connect pipe based on flange sizes.

# EXAMPLE:

| Category 50-32-200 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub category | | Dna | DNm | a | f | h3 | h2 | L1 | B2 | w | T |
| a | 80 | 50 | 32 | 80 | 385 | 220 | 180 | 750 | 350 | 60 | 741 |
| b | 90S | 50 | 32 | 80 | 385 | 220 | 180 | 800 | 350 | 60 | 764 |
| c | 90L | 50 | 32 | 80 | 385 | 220 | 180 | 800 | 350 | 60 | 789 |
| d | 100L | 50 | 32 | 80 | 385 | 220 | 180 | 1000 | 350 | 60 | 827 |
| e | 112M | 50 | 32 | 80 | 385 | 220 | 180 | 1000 | 350 | 60 | 841 |
| f | 132S | 50 | 32 | 80 | 385 | 280 | 180 | 1000 | 350 | 60 | 930 |
| g | 132M | 50 | 32 | 80 | 385 | 280 | 180 | 1000 | 350 | 60 | 930 |
| h | 160M | 50 | 32 | 80 | 385 | 280 | 180 | 1000 | 350 | 60 | 1065 |

| Category 65-40-200 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub category | | Dna | DNm | a | f | h3 | h2 | L1 | B2 | w | T |
| a | 80 | 65 | 40 | 100 | 385 | 220 | 180 | 800 | 350 | 60 | 761 |
| b | 90S | 65 | 40 | 100 | 385 | 220 | 180 | 800 | 350 | 60 | 784 |
| c | 90L | 65 | 40 | 100 | 385 | 220 | 180 | 1000 | 350 | 60 | 809 |
| d | 100L | 65 | 40 | 100 | 385 | 220 | 180 | 1000 | 350 | 60 | 847 |
| e | 112M | 65 | 40 | 100 | 385 | 220 | 180 | 1000 | 350 | 60 | 861 |
| f | 132S | 65 | 40 | 100 | 385 | 280 | 180 | 1000 | 400 | 60 | 950 |
| g | 132M | 65 | 40 | 100 | 385 | 280 | 180 | 1000 | 400 | 60 | 950 |
| h | 160M | 65 | 40 | 100 | 385 | 280 | 180 | 1200 | 440 | 60 | 1085 |

| Category 80-50-200 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub category | | Dna | DNm | a | f | h3 | h2 | L1 | B2 | w | T |
| a | 90S | 80 | 50 | 100 | 358 | 220 | 200 | 800 | 350 | 60 | 784 |
| b | 90L | 80 | 50 | 100 | 358 | 220 | 200 | 1000 | 350 | 60 | 809 |
| c | 100L | 80 | 50 | 100 | 358 | 220 | 200 | 1000 | 350 | 60 | 847 |
| d | 132S | 80 | 50 | 100 | 358 | 280 | 200 | 1000 | 400 | 60 | 950 |
| e | 132M | 80 | 50 | 100 | 358 | 280 | 200 | 1200 | 400 | 60 | 1085 |
| f | 160M | 80 | 50 | 100 | 358 | 280 | 200 | 1200 | 440 | 60 | 1085 |
| g | 160L | 80 | 50 | 100 | 358 | 280 | 200 | 1200 | 440 | 60 | 1085 |
| h | 180M | 80 | 50 | 100 | 358 | 300 | 200 | 1200 | 440 | 60 | 1175 |
| i | 180L | 80 | 50 | 100 | 358 | 300 | 200 | 1200 | 440 | 60 | 1175 |

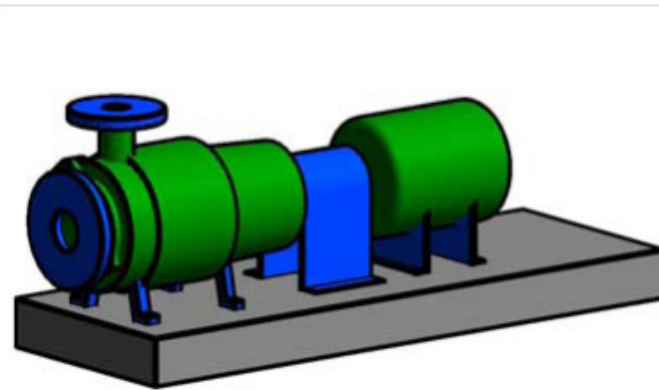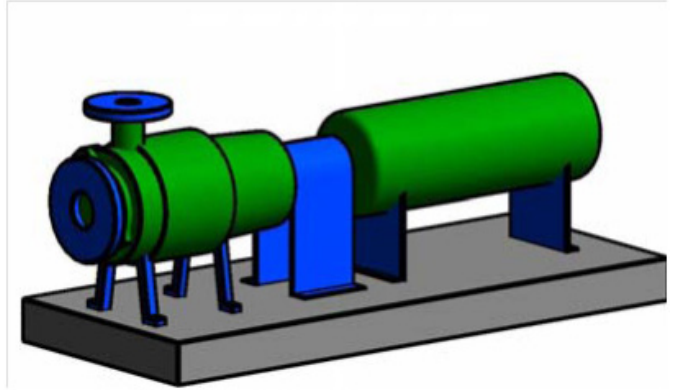| Category 100-65-200 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub category | | Dna | DNm | a | f | h3 | h2 | L1 | B2 | w | T |
| a | 90L | 100 | 65 | 100 | 500 | 300 | 225 | 1000 | 400 | 75 | 924 |
| b | 100L | 100 | 65 | 100 | 500 | 300 | 225 | 1000 | 400 | 75 | 964 |
| c | 112M | 100 | 65 | 100 | 500 | 300 | 225 | 1000 | 400 | 75 | 1065 |
| d | 132S | 100 | 65 | 100 | 500 | 300 | 225 | 1200 | 400 | 75 | 1065 |
| e | 132M | 100 | 65 | 100 | 500 | 300 | 225 | 1200 | 400 | 75 | 1065 |
| f | 160M | 100 | 65 | 100 | 500 | 300 | 225 | 1200 | 440 | 75 | 1200 |
| g | 160L | 100 | 65 | 100 | 500 | 300 | 225 | 1200 | 440 | 75 | 1200 |
| h | 180M | 100 | 65 | 100 | 500 | 300 | 225 | 1300 | 440 | 75 | 1290 |
| i | 180L | 100 | 65 | 100 | 500 | 300 | 225 | 1300 | 440 | 75 | 1290 |
| j | 200L | 100 | 65 | 100 | 500 | 300 | 225 | 1400 | 505 | 75 | 1325 |

# Sample Revit Family:
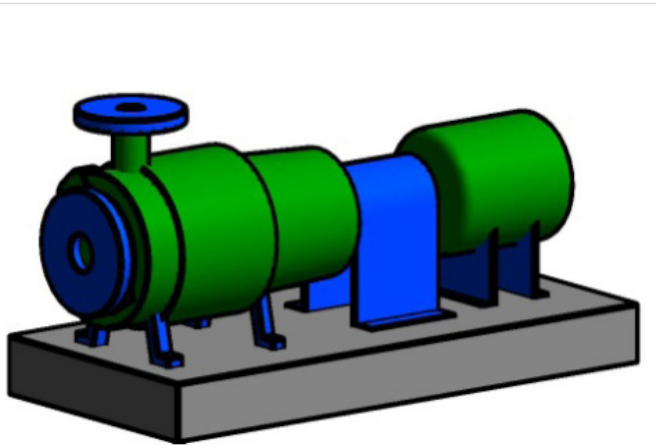


Category 5-32-200, Sub category 80
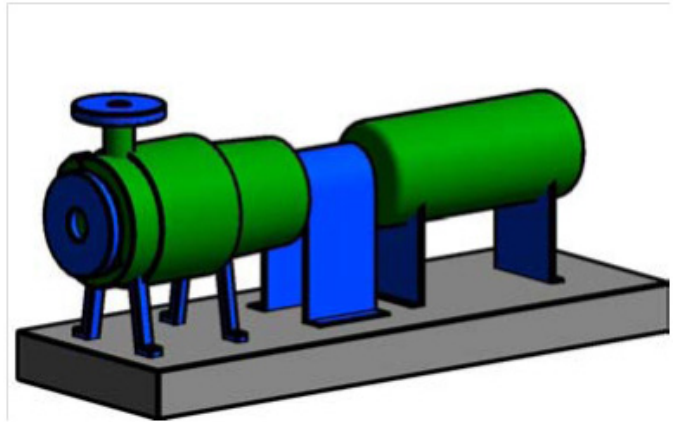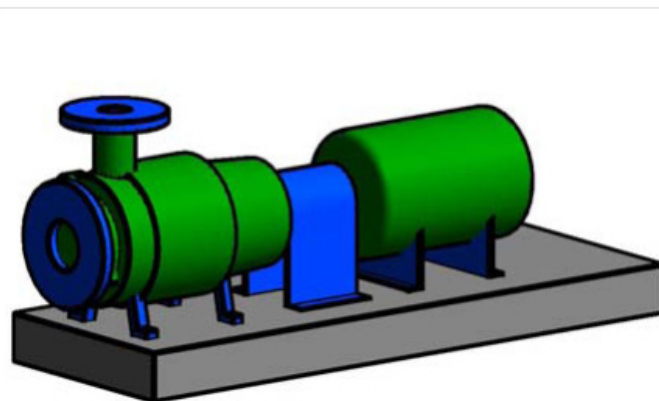


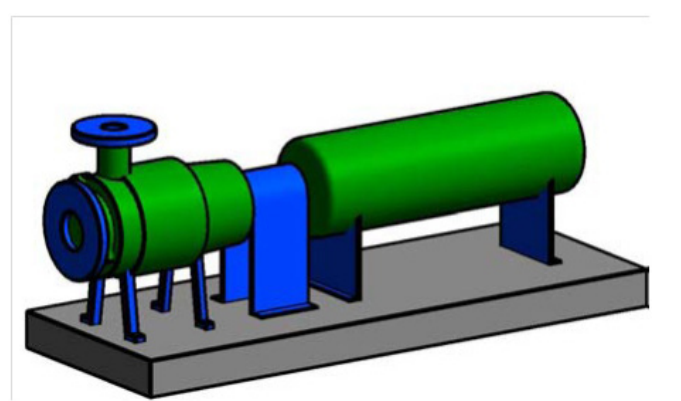Category 5-32-200, Sub category 132M
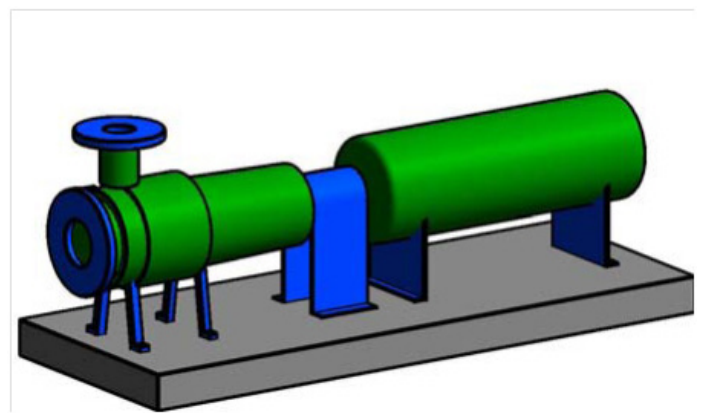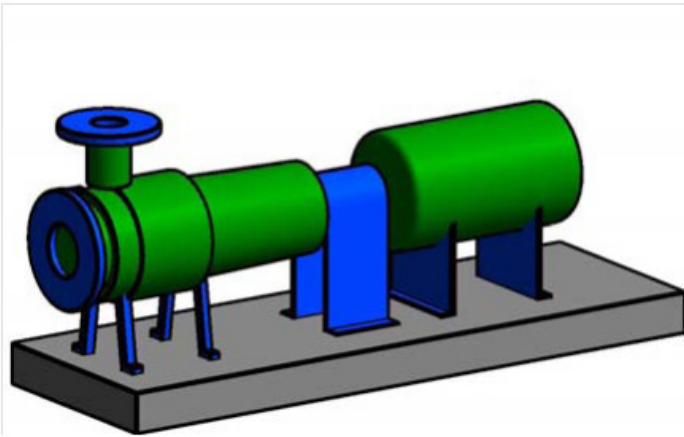


Category 65-40-200, Sub category 90L



Category 65-40-200, Sub category 160M



Category 80-50-200, Sub category 100L



Category 80-50-200, Sub category 180M

Category 100-65-200, Sub category 112M  Category 100-65-200, Sub category 200L

## RESULTS:

To meet the pressing project deadlines, we allocated more resources to the project and were able to deliver the project on time. The client expressed appreciation for the level of details provided by Revit Modeling India experts within the Revit families generated. In our client's words

*"Your team developed BIM objects in a standardized format which helped in maintaining the product integrity. Your work was fantastic and we'll have much more coming your way."*