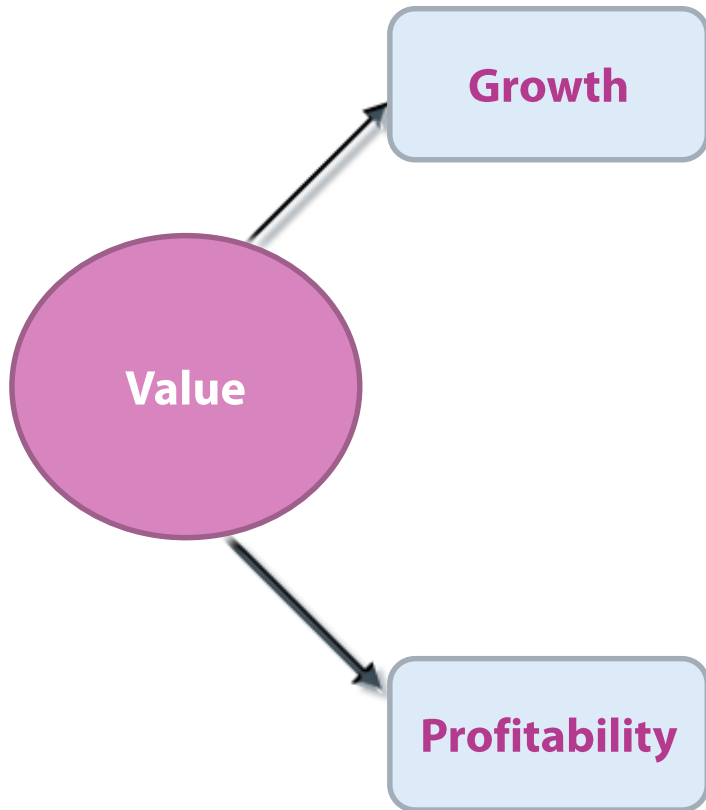# Visualisation and illustration

2014-05-06

Maria Nilsson
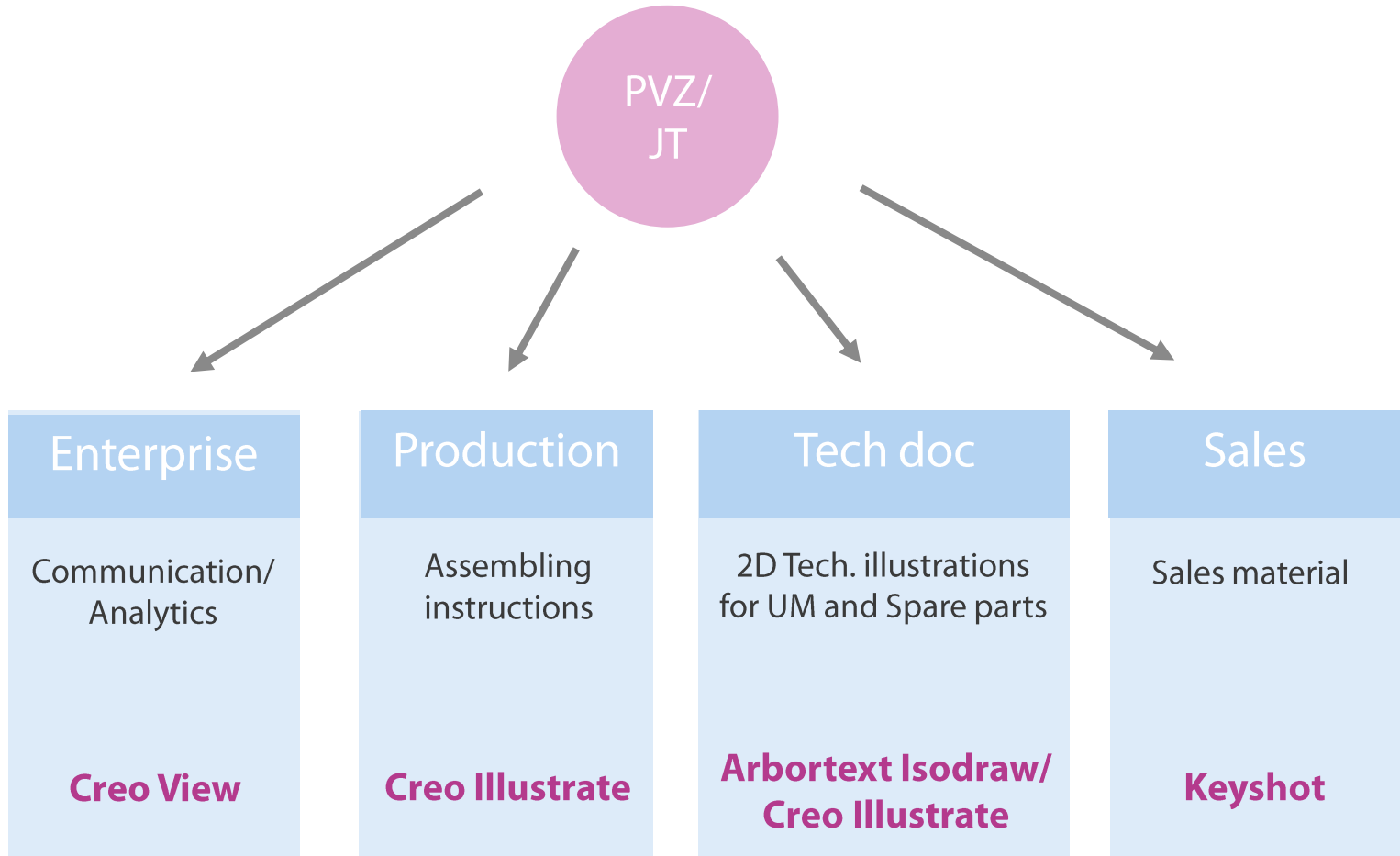
PDS

Challenge

Growth

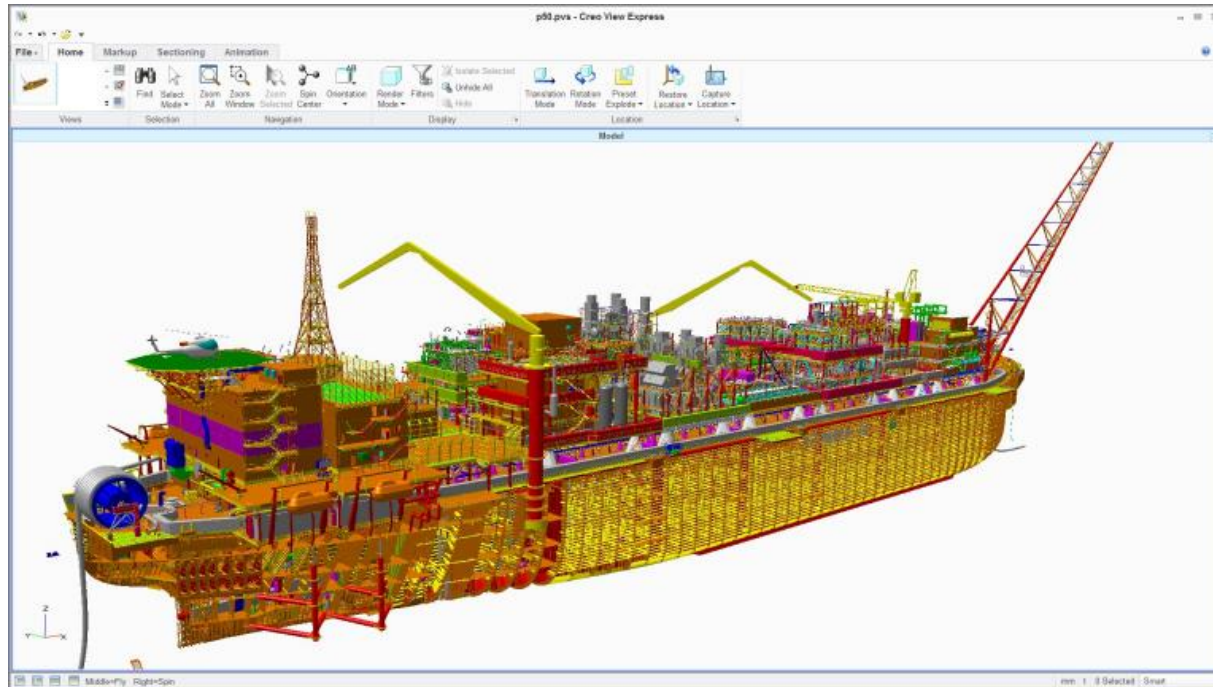- Link all kinds of visual material with CAD
- Only one full author – all material through this person
- Improve customer facing material

Value

Profitability

- Shorten Illustration production and update times
- Lower translation cost
- Less spent engineering time to update others

One Lightweight format – many outputs

PVZ/ JT

Enterprise	Production	Tech doc	Sales
Communication/ Analytics	Assembling instructions	2D Tech. illustrations for UM and Spare parts	Sales material
Creo View	**Creo Illustrate**	**Arbortext Isodraw/ Creo Illustrate**	**Keyshot**

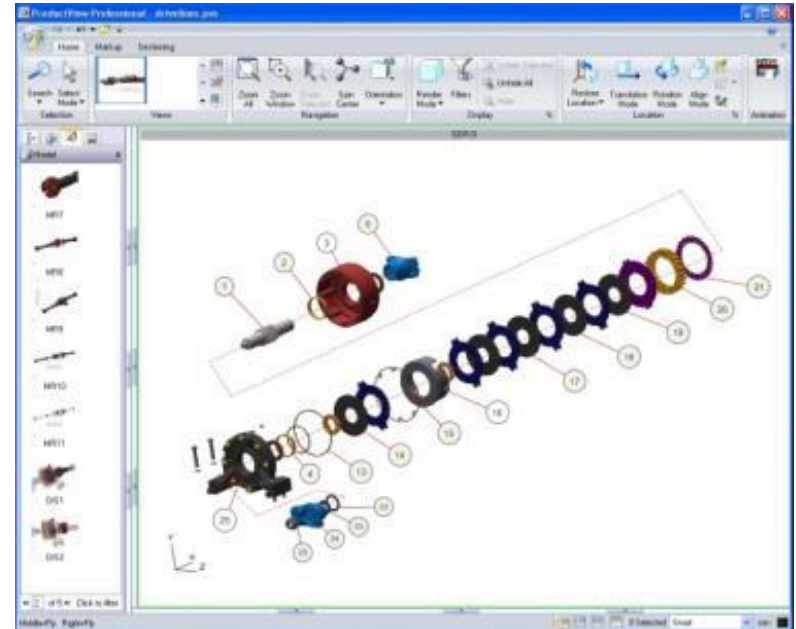# Creo View- one common viewer

Features

- Speed of loading
- Data compression
- Memory efficiency
- Interaction performance
- Loads really large and complex 3D models

Purpose

- Communicate CAD to non-CAD users
- View animated step by step mounting instructions
- View Isodraw/creo illustrate illustrations

Technical illustrations- Trends and Challanges

- **Data exists in CAD -** How do we reuse?

- **CAD is missing information –** That is important in technical illustrations (ECAD, cables, threads..)

- **Complex products**– Hard to describe in words.

- **Translation is expensive**- A picture says a thousand words.

- **Customers-** Are expecting quick starts instead of heavy manuals.

- **Service personnel-** Needs more complex information

- **Laptop, IPAD-** New technology enables new deliverable formats.

What is a technical illustration?

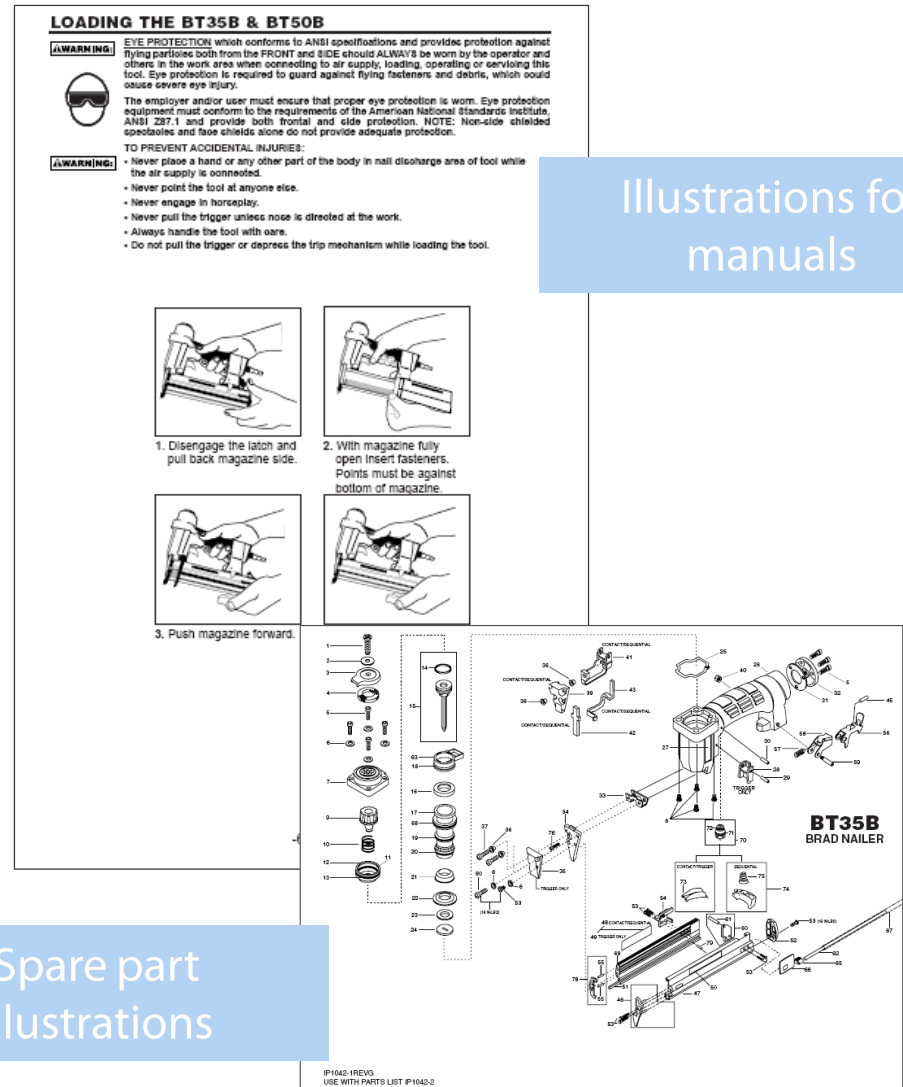## Technical illustrations

Graphical product information about

- Assembling
- Use
- Serve
- Parts information

Make it simple

- Only useful details

Graphical details

- Perspective
- Thin/thick lines
- No hidden lines
- Arrows
- Enlargements
- Symbols
- Colours

Illustrations for manuals

Spare part illustrations

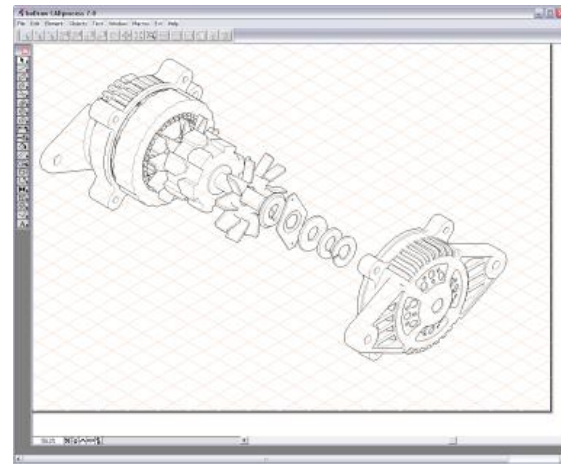# Two solutions for Technical illustration/Animation

Both

- Connect to CAD and get changes to the illustration automatically updated
- Connect to PLM
- Structure handling
- Intelligent objects and structures
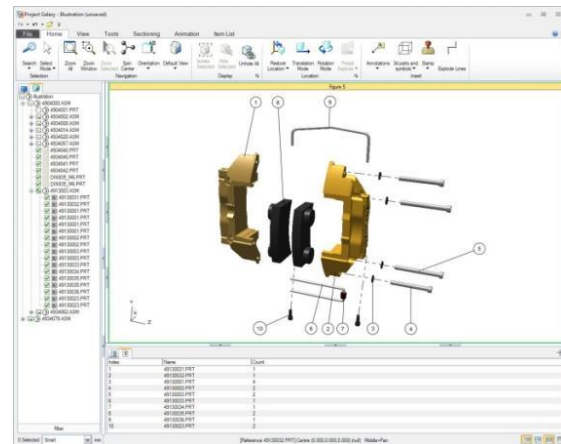
Arbortext IsoDraw

- Isometric view- perspective view
- 2D Output
- Thick/thin lines
- Large 2D library
- Draw in 2D

Creo Illustrate

- Based on viewer with lightweight formats
- Animations
- Rendering features
- CAD must be complete, no 2D drawing capability
- Easy to use
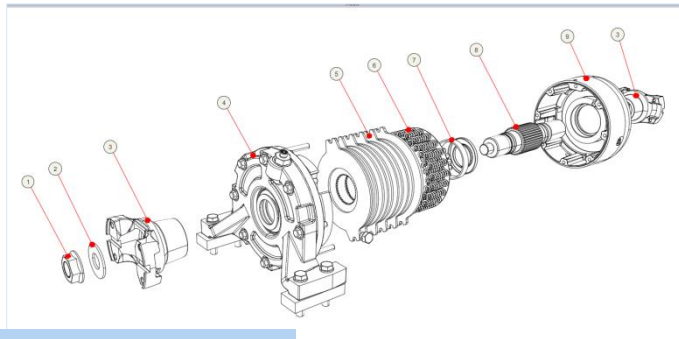- Advanced BOM management

IsoDraw

Creo
Illustrate

What software should I go for?

User

- Illustrator/Technical writer
- Market communicator

Output

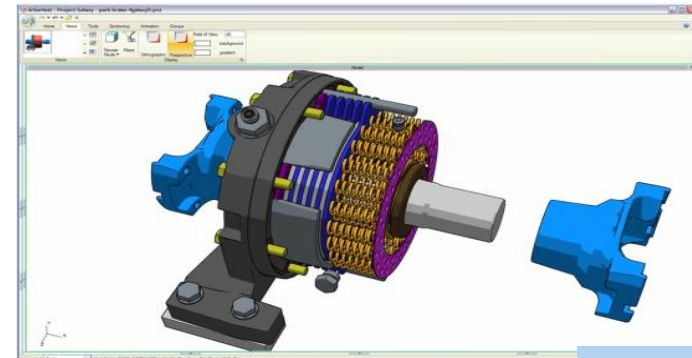- Printed 2D illustrations
- Smart illustrations on web

Arbortext IsoDraw

User
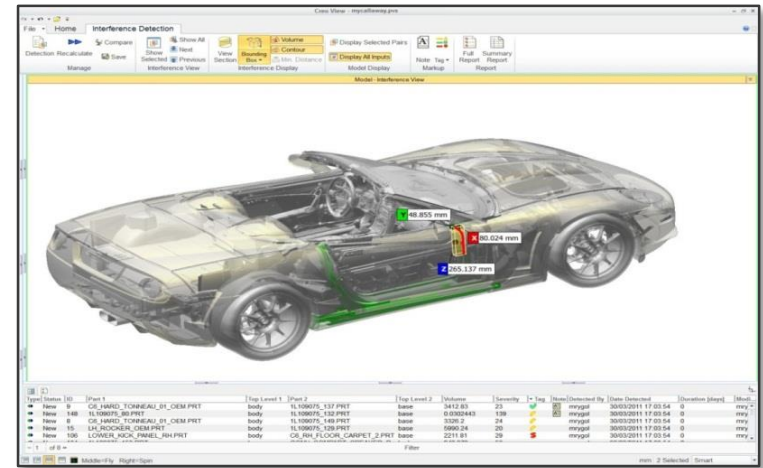
- Production
- Engineer

Output

- Assembling instructions
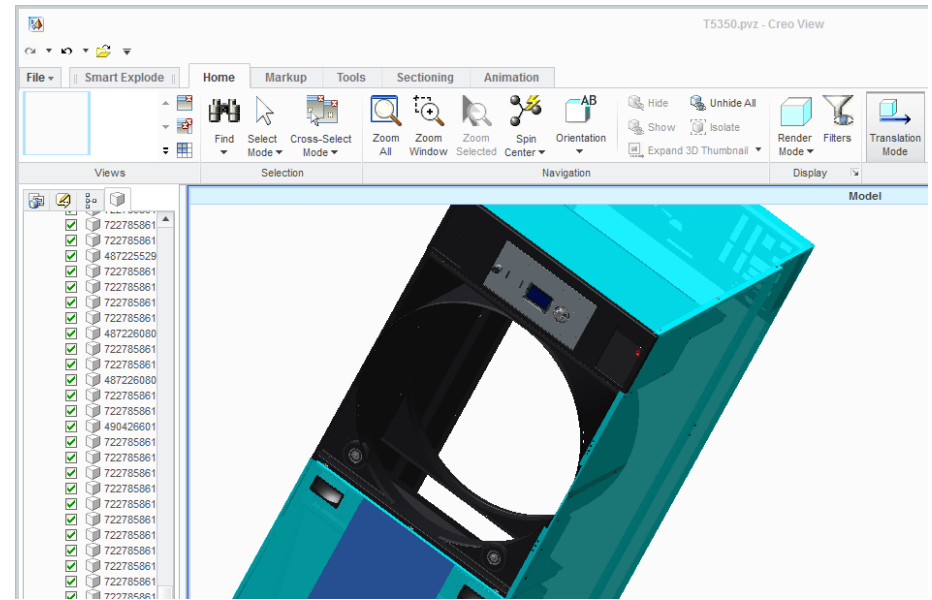- Animations

Creo Illustrate

Creo View Plattform (Included in Windchill)

- Comprehensive view, interrogation, markup and annotation tools

- Supports a wide range of formats: >180 file types

- Fast performance enables viewing of massive assemblies

- Explodes, cuts

- Layers

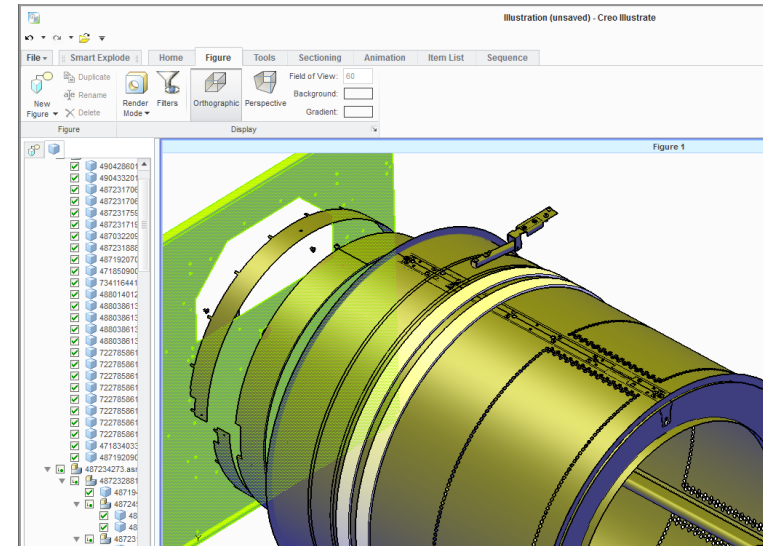- Support for Creo and Windchill Attributes

Creo View MCAD added functionality

- Smart Explode

- Advanced Cuts

- Export and import geometry (IGES, STEP)

- Construction geometry for better measuring (Planes, Centerlines)

- Interference (add on)

- Edit color display

- Color coding and structure

SIMONSOFT

PDS

Creo Illustrate - added funtionality

- Associative with Windchill and Creo changes

  - Illustration source object

- EBOM – SBOM concept

- Explode lines, call outs, library and other technical illustration items

- Create multiple images from one file

- Added view formats

- Animations

  - Animations including operations (screw, unscrew)

  - Animated step by step instructions

- Vector based output - SVG

SIMONSOFT
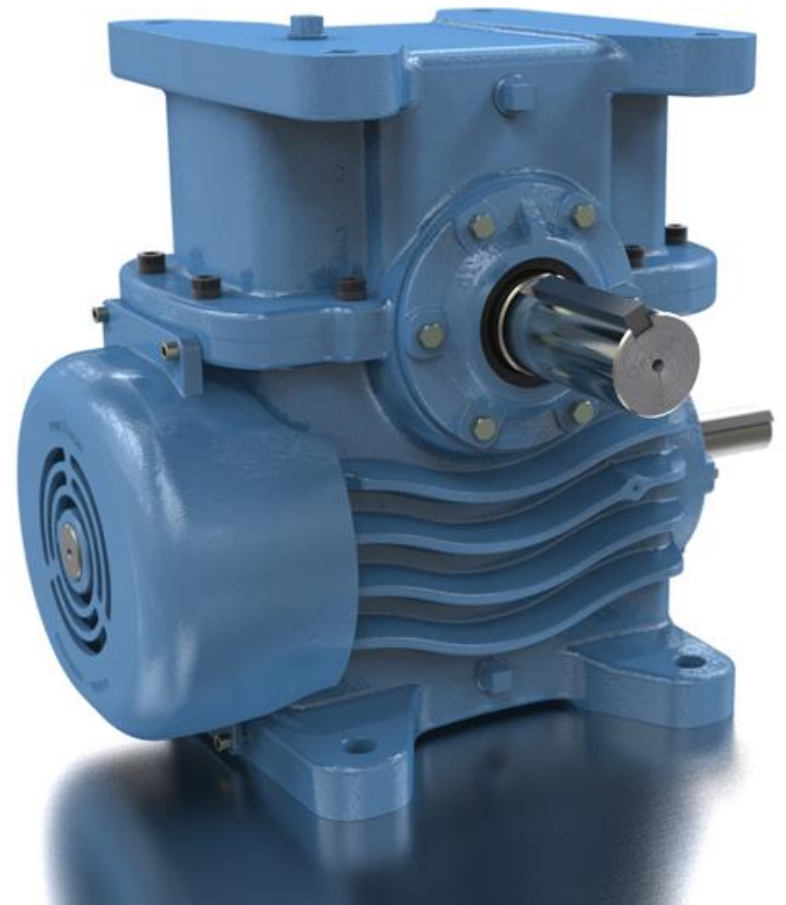
PDS

Keyshot for Sales material

Fast
- No need for a special graphics card, nor any dedicated drivers

Easy
- No specialized expertise is needed
- Perfect tool for creating sales material
- Imports most common CAD formats
- Create a perfect photo of the product before it is manufactured

Amazing
- Uses authentic materials
- Combines photographs with rendered images
- KeyShot features the only rendering engine that is certified by the CIE (International Commission on Illumination)

Keyshot Demo Video