



The Power of “I” in BIM

Sponsored by
PROCORE

Presented by

Raul Gomez, Robins & Morton | Blake Sayers, Robins & Morton
Tim Kelly, Assemble | Mikael Reckley, Procore

Speakers



RAUL GOMEZ

*Director of Virtual Design & Construction & BIM
Robins & Morton*

Gomez has over 25 years of AEC VDC/BIM/CAD technology integration in the United States and internationally. His focus is developing strategies and relationships within AEC platform technologies that will support company initiatives by way of model-based intelligence, streamlining building metadata for purposes of model interrogation, quantity extraction and constructability.



MIKAEL RECKLEY

*Field Marketing Manager
Procore*

Reckley graduated from the United States Military Academy and served as an officer in the U.S. Army from 1996 to 2001. After leaving the service, he worked for Turner Construction for several years filling multiple roles such as assistant superintendent, area superintendent, project engineer and project manager. For the last 6 years at Turner, Reckley served as the virtual design and construction manager, where he was exposed to several technology topics such as BIM, electronic document control and punchlist.



TIM KELLY

*Product Manager
Assemble Systems*

Kelly works closely with customers to develop the product strategy and roadmap. Kelly has spent the last 7 years innovating with BIM in design and construction from the general contractor and construction management perspective. Kelly earned his bachelors of construction science from Texas A&M University. Prior to joining Assemble Systems, Kelly served as BIM Manager at Satterfield & Pontikes Construction.



BLAKE SAYERS

*Preconstruction
Robins & Morton*

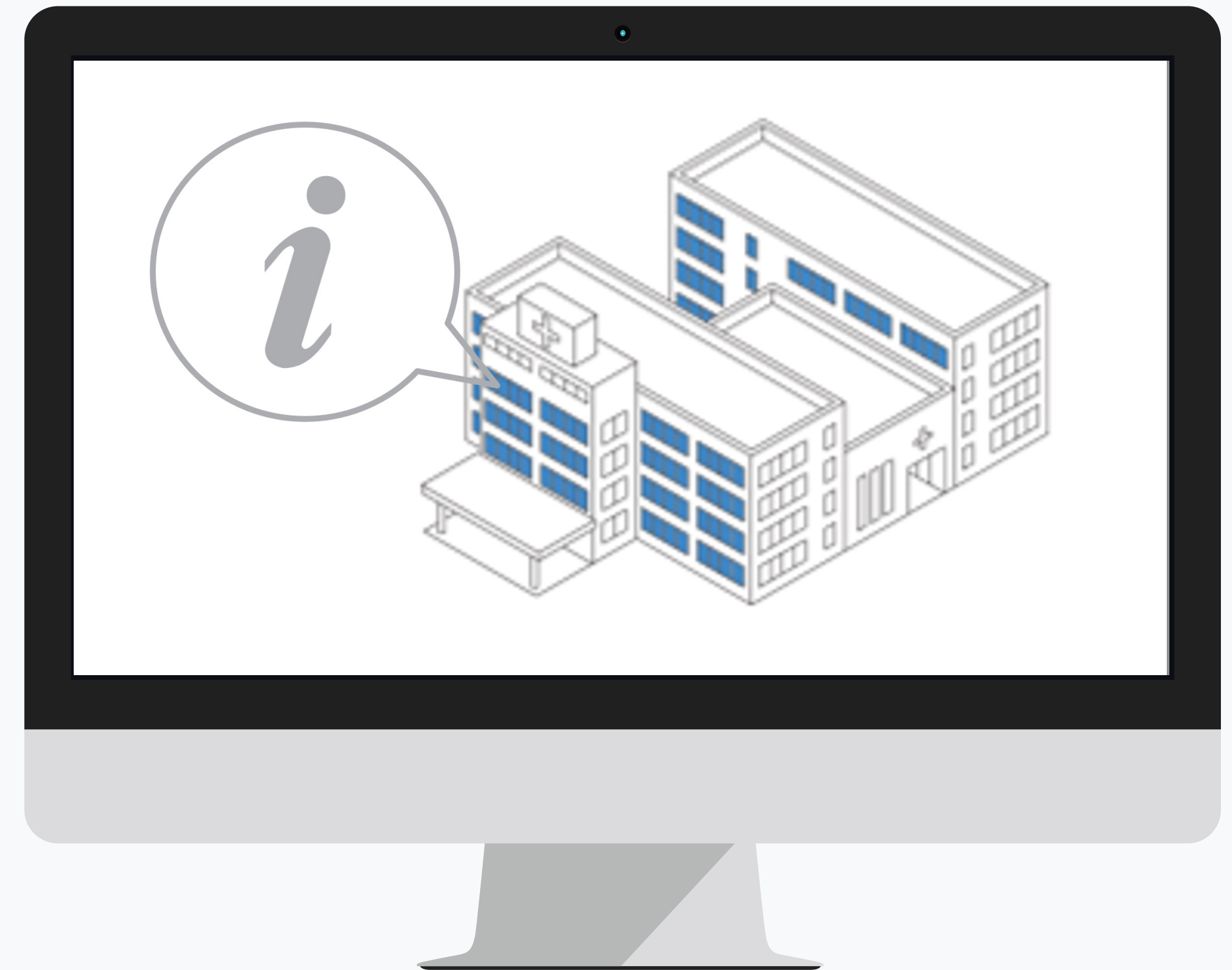
Sayers focuses on large healthcare projects. Blake is passionate about finding new ways to deliver the owner a better product, Assemble & 3D modeling software has played a large role in making this happen for Blake.



Agenda

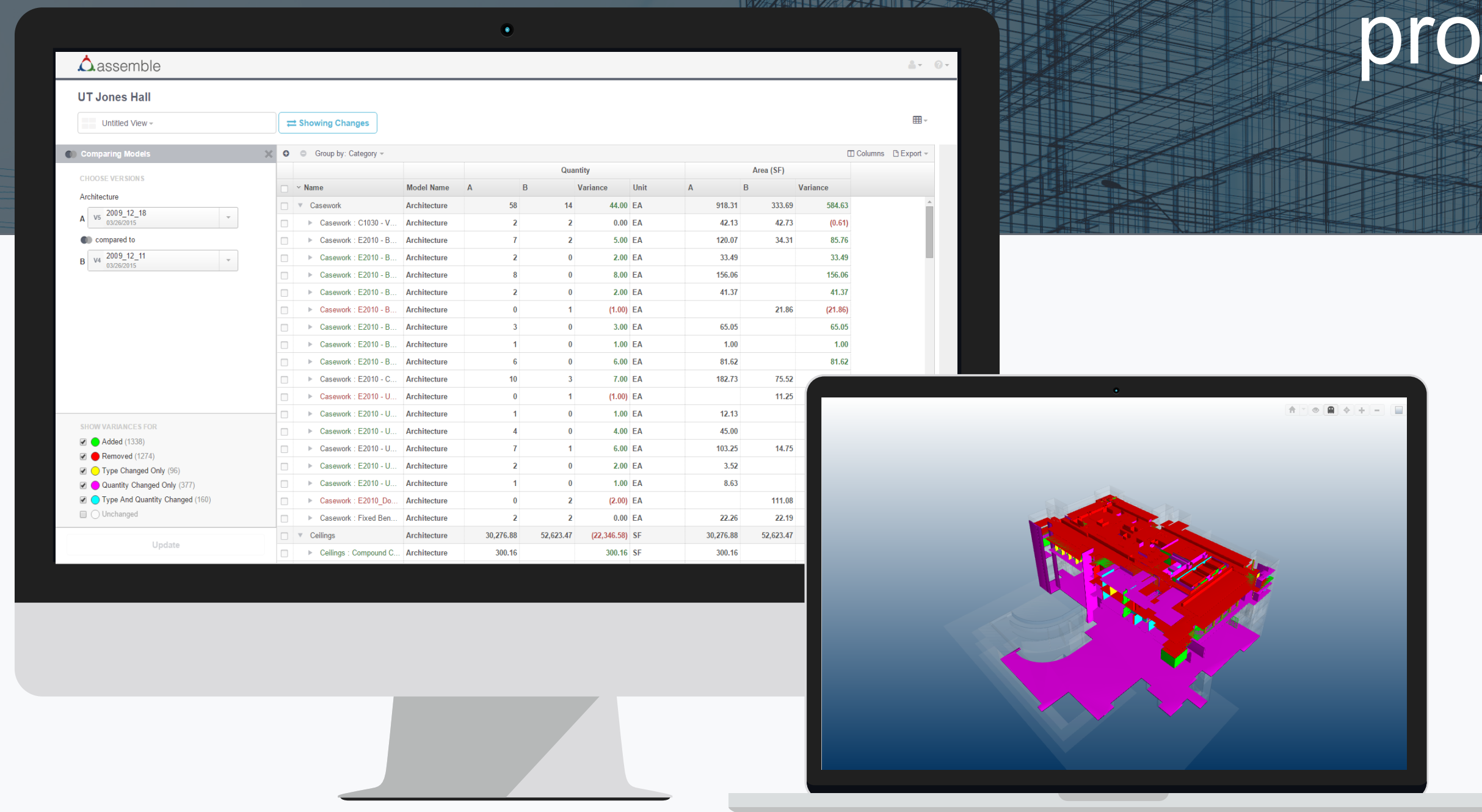
Today's webinar

- + Company introductions
- + The importance of information
- + Benefits of cloud-based software
 - > During preconstruction
 - > During construction
- + BIM utopia



About Assemble

Assemble unlocks the power of model data to create intelligent building information across the project life cycle.



Access



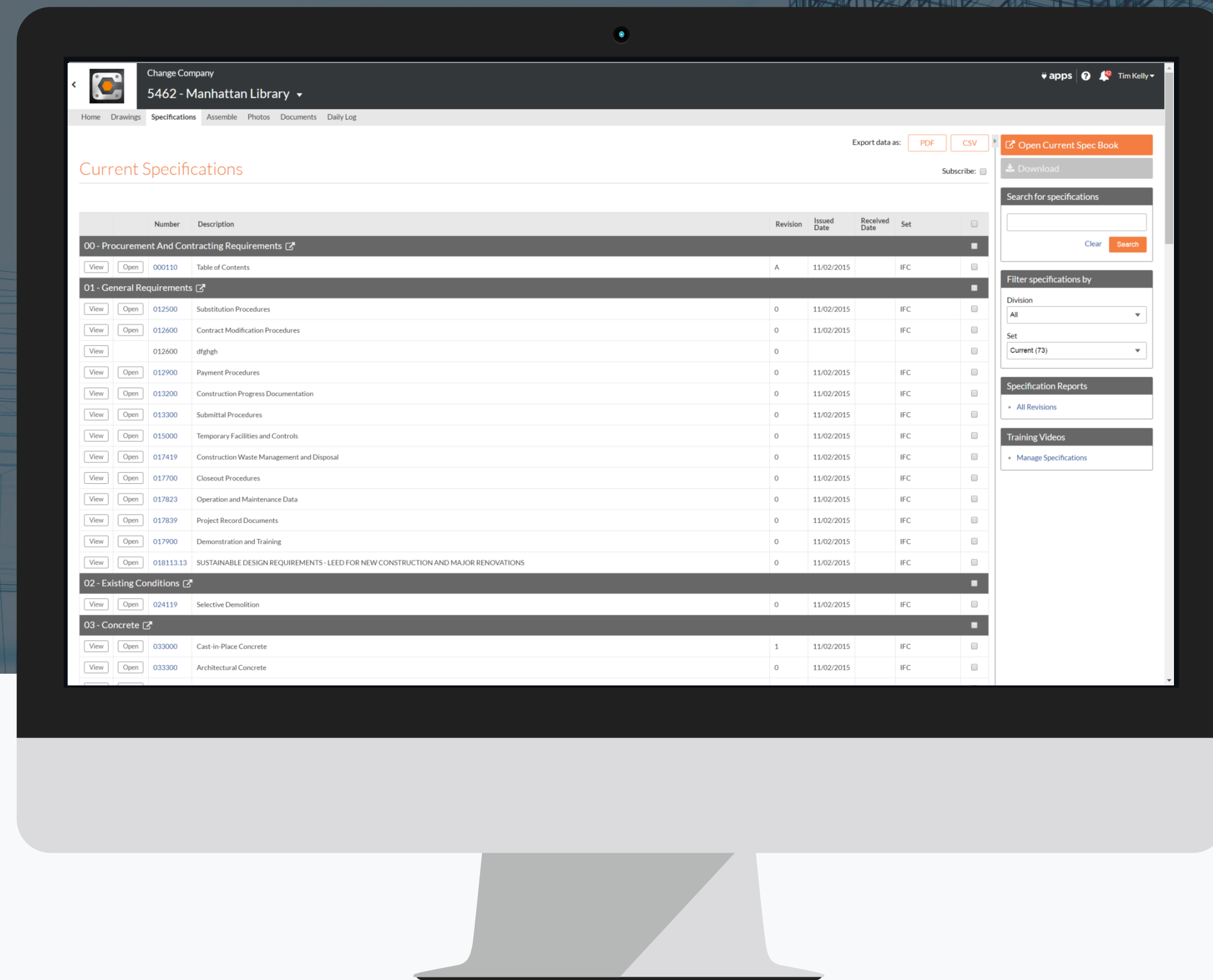
Analyze



Share

About Procore

Procore is the world's most widely used construction management software, helping firms drastically increase project efficiency and accountability by streamlining and mobilizing project communication and documentation.



PROCORE

assemble

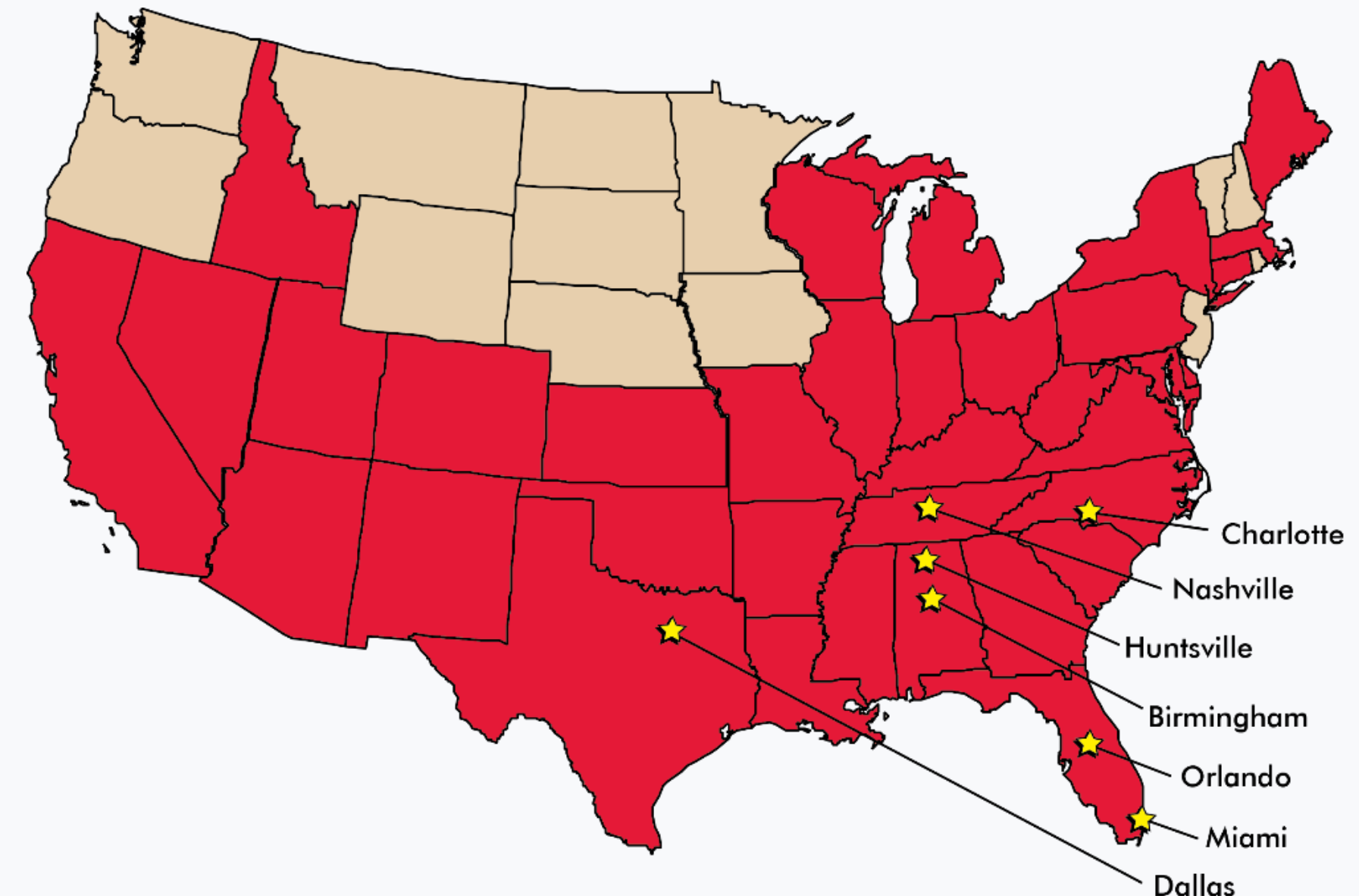
ROBINS & MORTON



About Robins & Morton

- + Same ownership/culture for 70+ years
- + Continuous improvement – LEAN
- + National healthcare experience
- + 35+ large replacement hospital
- + Over 1,500 completed healthcare projects in 35 states

ROBINS & MORTON BUILDING **Forward**



Robins & Morton: Experience

MAINE GENERAL MEDICAL CENTER – ALFOND CENTER FOR HEALTH
 Augusta, Maine



Relevancy to NAMC

- ✓ Project delivery
- ✓ Safety
- ✓ Prefabrication
- ✓ Quality at the source
- ✓ Lean project delivery

BAYLOR SCOTT AND WHITE MEDICAL CENTER – HILLCREST
 Waco, Texas



Relevancy to NAMC

- ✓ Design assist
- ✓ Budget constraints
- ✓ Size

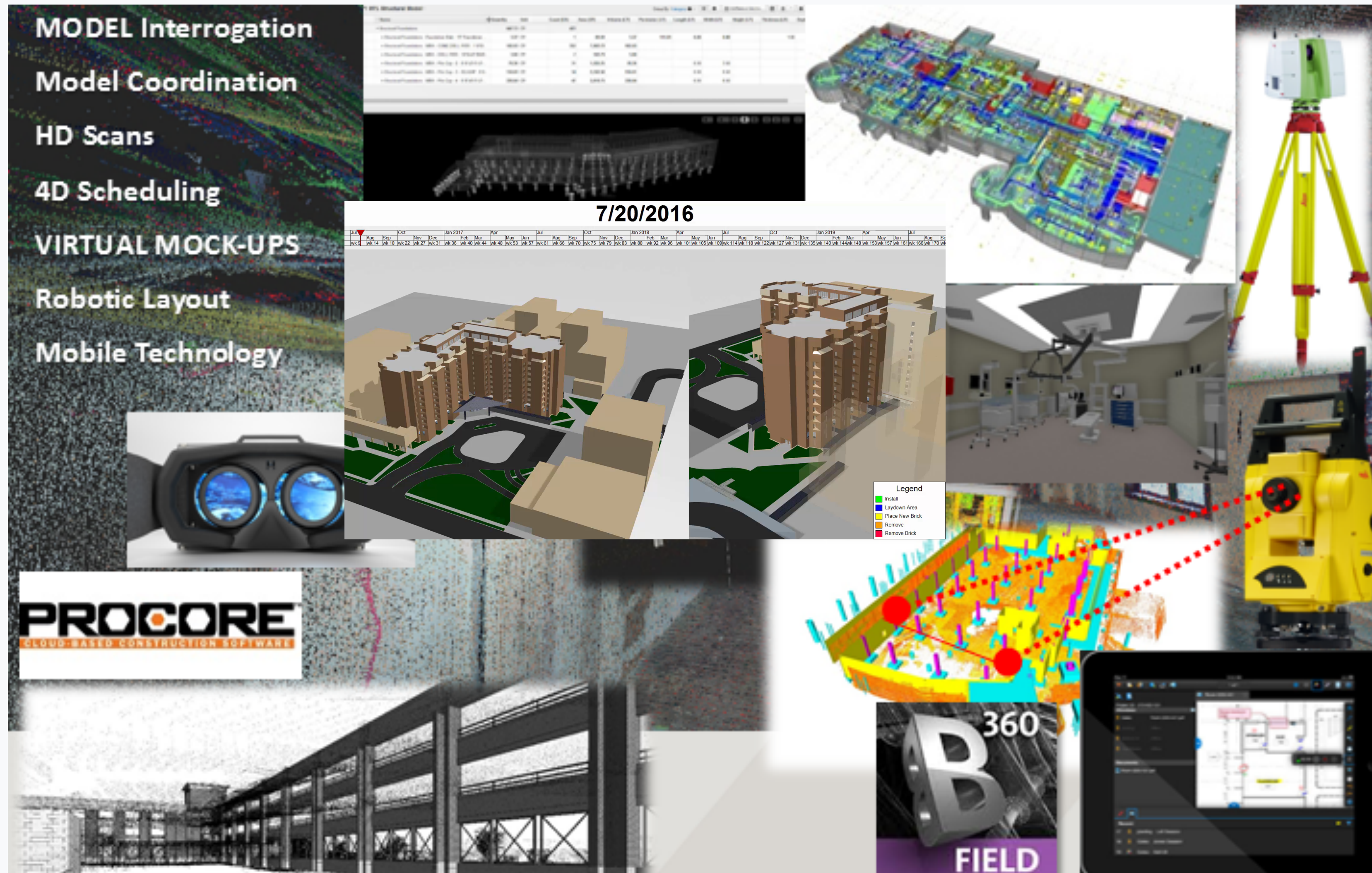
BAPTIST MEMORIAL HOSPITAL – NORTH MISSISSIPPI
 Oxford, Mississippi



Relevancy to NAMC

- ✓ Design assist
- ✓ Prefabrication
- ✓ Safety
- ✓ Size

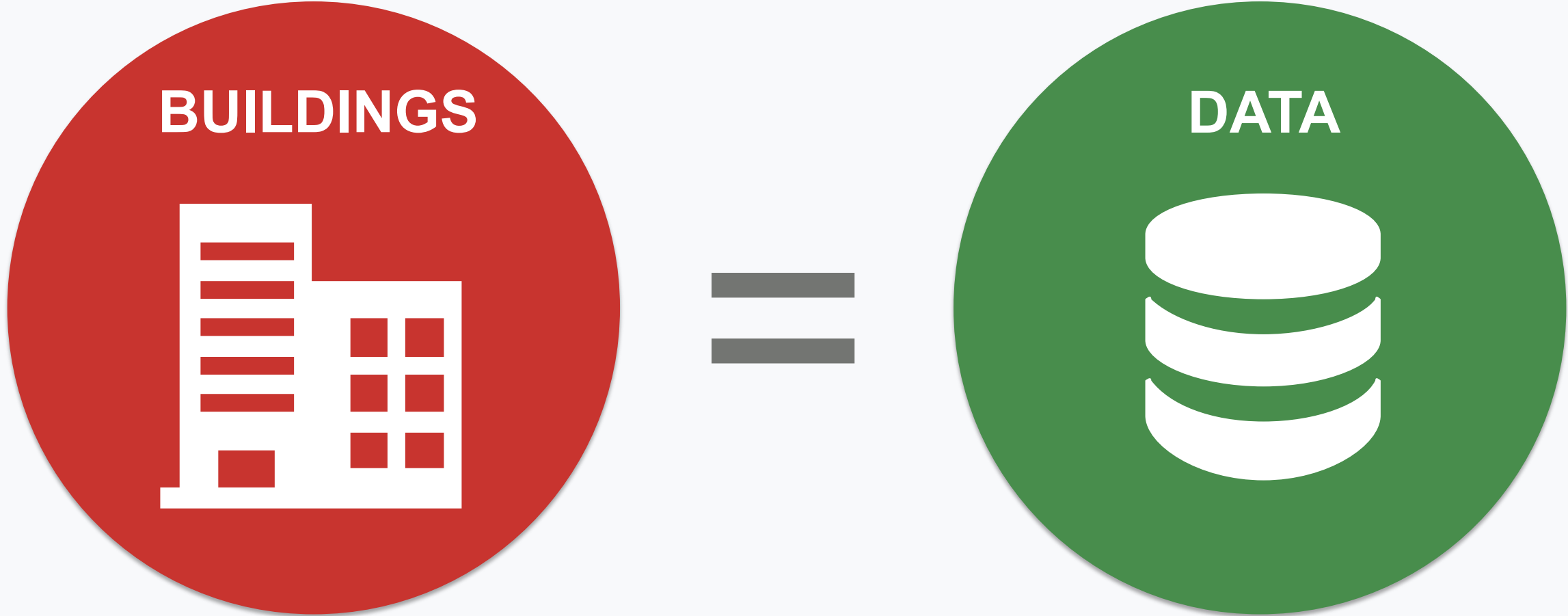
Robins & Morton: VDC Technology in Construction



BIM as a Database

“BIM is a computer model database of building design information, which may also contain information about the building’s construction, management, operation and maintenance.”

- *Graphisoft*



Query values to get a visual representation of the associated components and any other associated data.

BIM as a Database

Scope

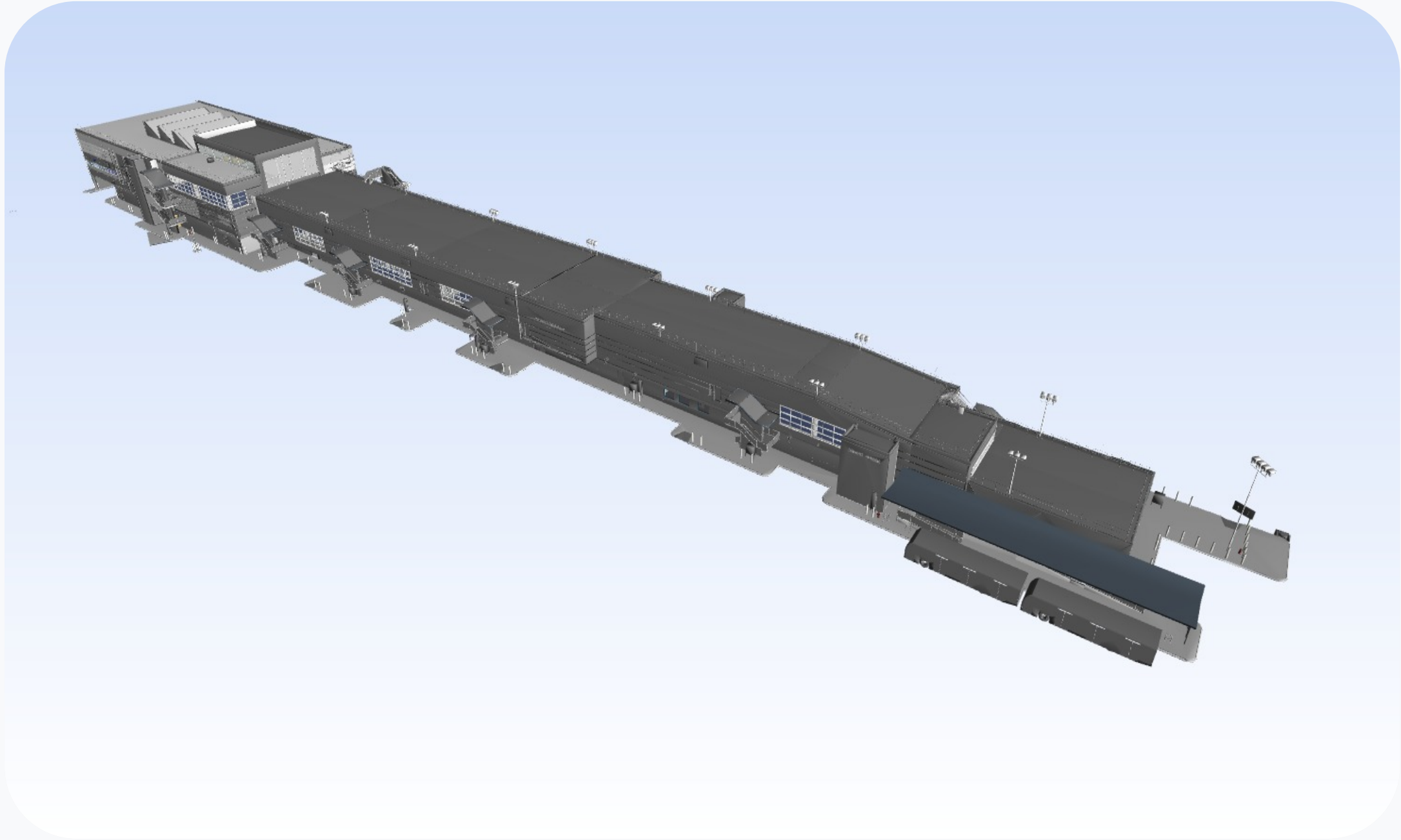
Logistics

Complexity

Schedule

Cost

Production



Improve the outcome

BIMM

Information

Documentation



Parametric

Specify Types

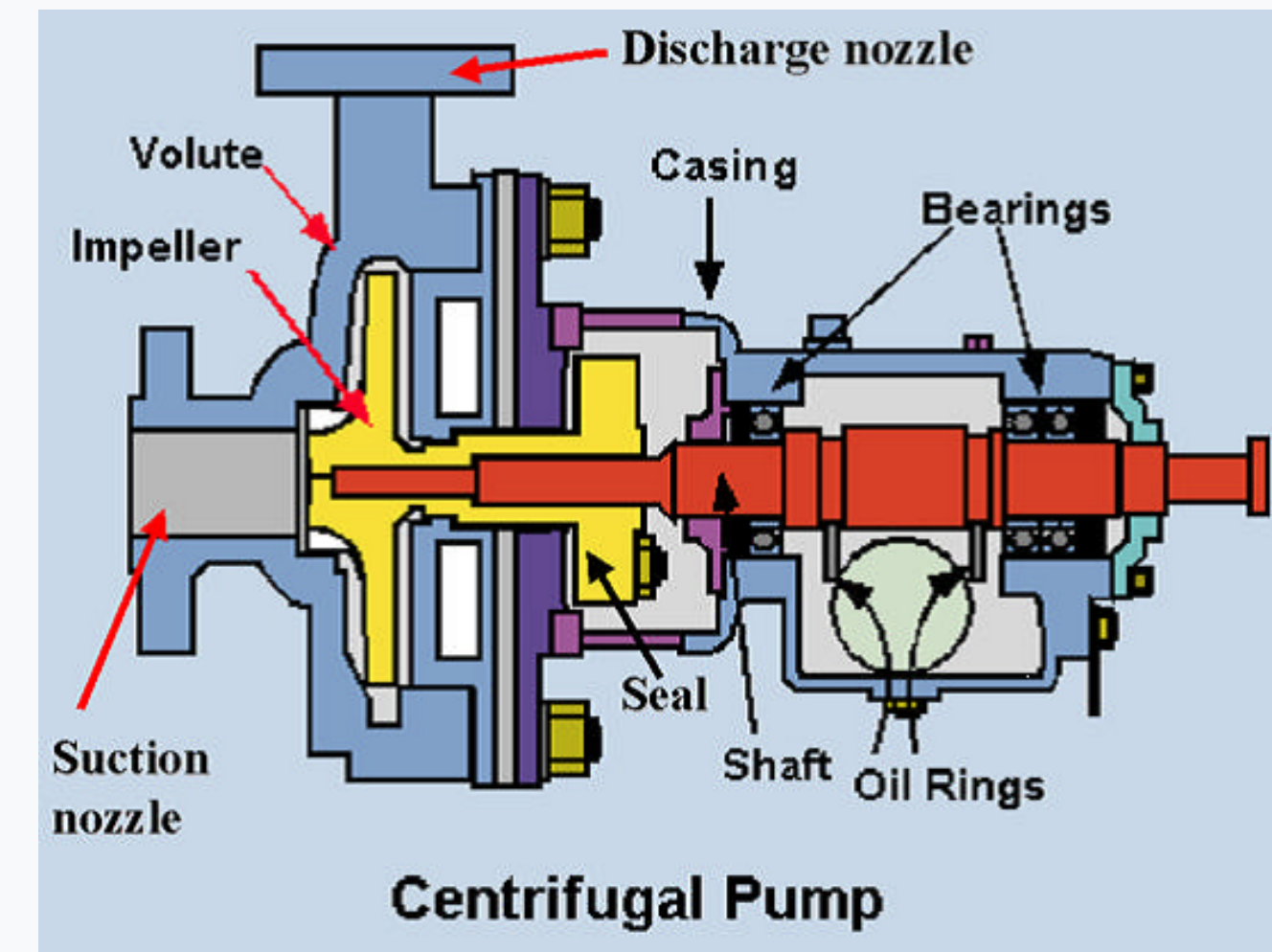
Family: F11507.rfa

Type	Horsepower	Motor Speed	Working Pressure	Suction Flange Radius	Discharge Flange Radius	Suction Flange Length	Suction Flange Length from center	Discharge Flange Length	HP Radius	Motor Height	Base Width	Length of Base	Right Edge of Base	Weight
TACO 5HP-1160-125psi	5 HP	1160	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 3 79/256"	0' 11 241/256"	1' 2 11/64"	2' 8"	0' 0 225/256"	235
TACO 5HP-1160-250psi	5 HP	1160	250 psi	0' 4 1/8"	0' 3"	1' 5 59/128"	0' 4 15/256"	0' 7"	0' 3 79/256"	0' 11 241/256"	1' 2 11/64"	2' 8"	0' 0 37/64"	225
TACO .75HP-1160-125psi	.75 HP	1160	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 3 79/256"	0' 11 241/256"	1' 2 11/64"	2' 8"	0' 0 225/256"	265
TACO .75HP-1160-250psi	.75 HP	1160	250 psi	0' 4 1/8"	0' 3"	1' 5 59/128"	0' 4 15/256"	0' 7"	0' 3 79/256"	0' 11 241/256"	1' 2 11/64"	2' 8"	0' 0 37/64"	265
TACO 1HP-1160-125psi	1 HP	1160	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 7"	0' 3 79/256"	1' 1"	1' 2 11/64"	2' 8"	0' 0 225/256"	265
TACO 1HP-1160-250psi	1 HP	1160	250 psi	0' 4 1/8"	0' 3"	1' 5 59/128"	0' 4 15/256"	0' 7"	0' 3 79/256"	1' 1"	1' 2 11/64"	2' 8"	0' 0 37/64"	265
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TACO 1HP-1760-250psi	1 HP	1760	250 psi	0' 4 1/8"	0' 3"	1' 5 59/128"	0' 4 15/256"	0' 7"	0' 3 79/256"	0' 11 241/256"	1' 2 11/64"	2' 8"	0' 0 37/64"	265
TACO 1.5HP-1760-125psi	1.5 HP	1760	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 3 79/256"	1' 1"	1' 2 11/64"	2' 8"	0' 0 225/256"	265
TACO 1.5HP-1760-250psi	1.5 HP	1760	250 psi	0' 4 1/8"	0' 3"	1' 5 59/128"	0' 4 15/256"	0' 7"	0' 3 79/256"	1' 1"	1' 2 11/64"	2' 8"	0' 0 37/64"	265
TACO 2HP-1760-125psi	2 HP	1760	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 3 79/256"	1' 1"	1' 2 11/64"	2' 8"	0' 0 225/256"	265
TACO 2HP-1760-250psi	2 HP	1760	250 psi	0' 4 1/8"	0' 3"	1' 5 59/128"	0' 4 15/256"	0' 7"	0' 3 79/256"	1' 1"	1' 2 11/64"	2' 8"	0' 0 37/64"	265
TACO 3HP-1760-125psi	3 HP	1760	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 3 241/256"	1' 3 97/256"	1' 2 11/64"	2' 8"	0' 0 225/256"	295
TACO 3HP-1760-250psi	3 HP	1760	250 psi	0' 4 1/8"	0' 3"	1' 5 59/128"	0' 4 15/256"	0' 7"	0' 3 241/256"	1' 3 97/256"	1' 2 11/64"	2' 8"	0' 0 37/64"	295
TACO 7.5HP-3500-125psi	7.5 HP	3500	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 4 25/32"	1' 3 97/256"	1' 4 11/64"	3' 3"	0' 0 3/4"	385
TACO 7.5HP-3500-250psi	7.5 HP	3500	250 psi	0' 4 1/8"	0' 3"	1' 5 59/128"	0' 4 15/256"	0' 7"	0' 4 25/32"	1' 3 97/256"	1' 4 11/64"	3' 3"	0' 0 55/128"	385
TACO 10HP-3500-125psi	10 HP	3500	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 4 25/32"	1' 5 241/256"	1' 4 11/64"	3' 3"	0' 0 3/4"	405
TACO 10HP-3500-250psi	10 HP	3500	250 psi	0' 4 1/8"	0' 3"	1' 5 59/128"	0' 4 15/256"	0' 7"	0' 4 25/32"	1' 5 241/256"	1' 4 11/64"	3' 3"	0' 0 55/128"	405
TACO 15HP-3500-125psi	15 HP	3500	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 6 15/32"	1' 6 49/256"	1' 4 11/64"	3' 3"	0' 0 3/4"	510

Select one or more types on the right for each family listed on the left

OK Cancel Help

Media



Documentation

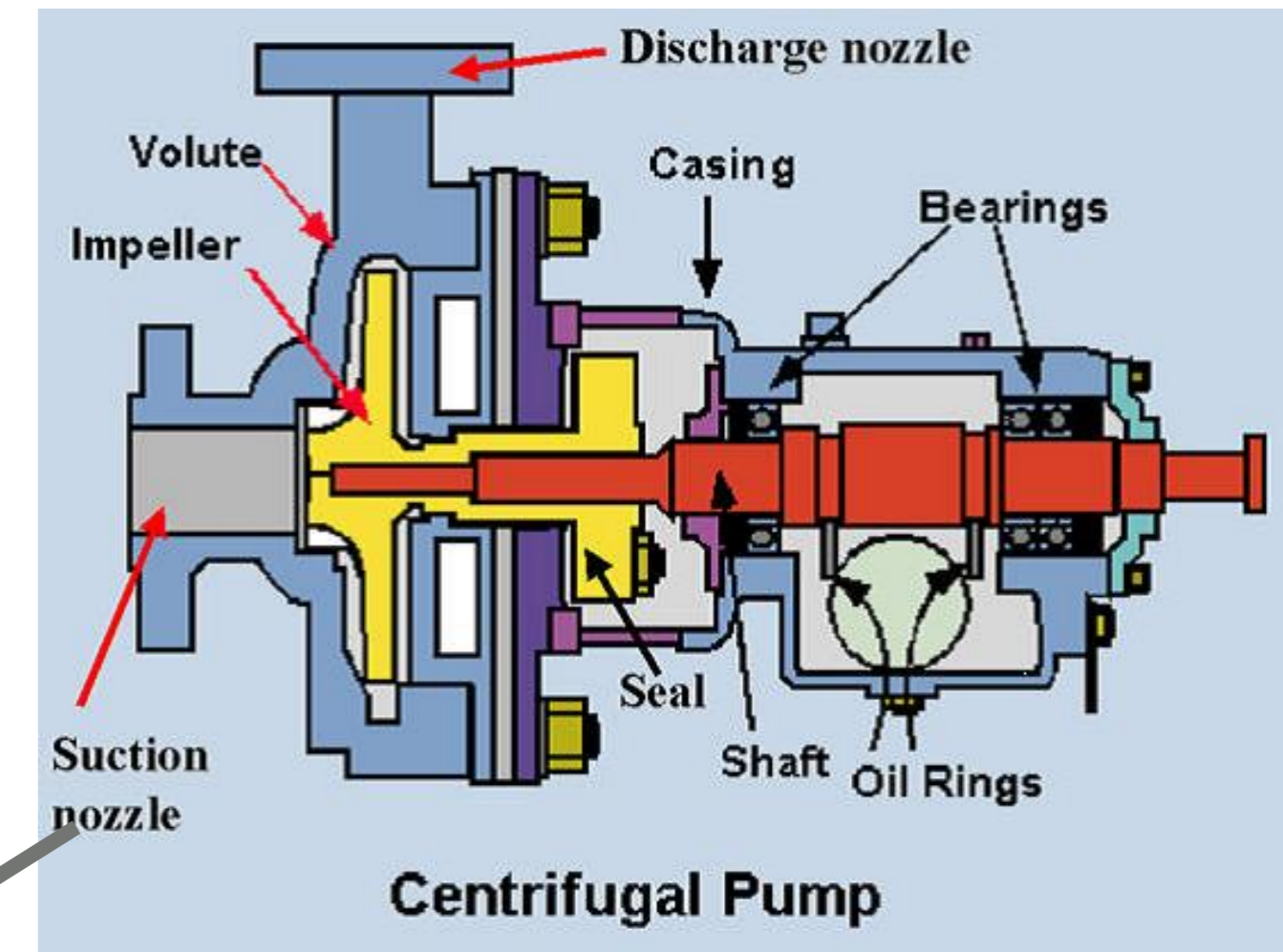


Parametric

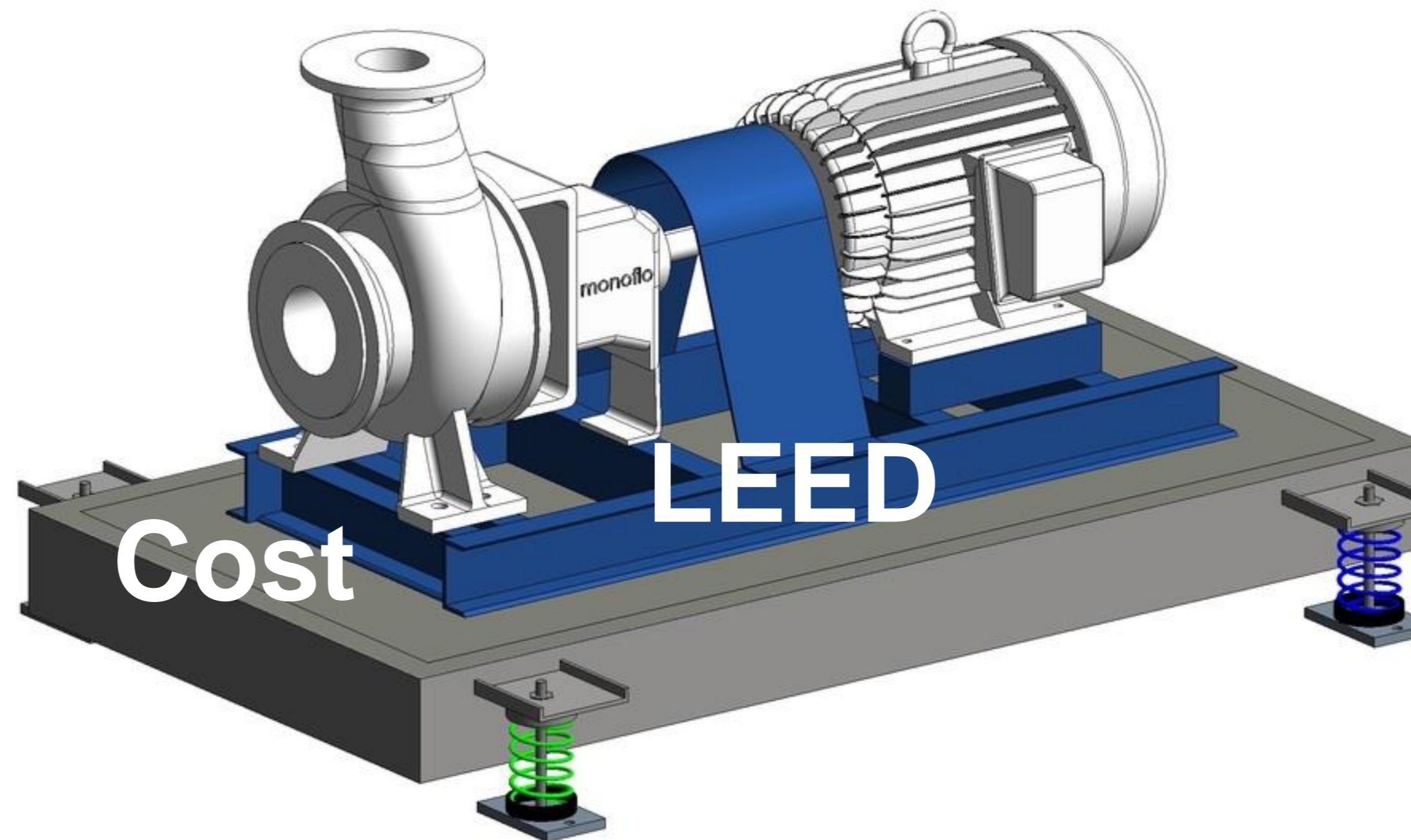
Specify Types

Type	Horsepower	Motor Speed	Working Pressure	Suction Flange Radius	Discharge Flange Radius	Suction Flange Length	Suction Flange Length from center	Discharge Flange Length	HP Radius	Motor Height	Base Width	Length of Base	Right Edge of Base	Weight
TACO 5HP-1160-125psi	5 HP	1160	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 3 79/256"	0' 11 241/256"	1' 2 11/64"	2' 8"	0' 0 37/64"	235
TACO 5HP-1160-250psi	5 HP	1160	250 psi	0' 4 1/8"	0' 3"	1' 5 19/128"	0' 4 15/256"	0' 7"	0' 3 79/256"	0' 11 241/256"	1' 2 11/64"	2' 8"	0' 0 225/256"	265
TACO .75HP-1160-125psi	.75 HP	1160	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 3 79/256"	0' 11 241/256"	1' 2 11/64"	2' 8"	0' 0 37/64"	265
TACO .75HP-1160-250psi	.75 HP	1160	250 psi	0' 4 1/8"	0' 3"	1' 5 19/128"	0' 4 15/256"	0' 7"	0' 3 79/256"	0' 11 241/256"	1' 2 11/64"	2' 8"	0' 0 37/64"	265
TACO 1HP-1160-125psi	1 HP	1160	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 3 79/256"	1' 1"	1' 2 11/64"	2' 8"	0' 0 225/256"	265
TACO 1HP-1160-250psi	1 HP	1160	250 psi	0' 4 1/8"	0' 3"	1' 5 19/128"	0' 4 15/256"	0' 7"	0' 3 79/256"	1' 1"	1' 2 11/64"	2' 8"	0' 0 37/64"	265
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TACO 1.5HP-1760-125psi	1.5 HP	1760	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 3 79/256"	1' 1"	1' 2 11/64"	2' 8"	0' 0 225/256"	265
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TACO 2HP-1760-125psi	2 HP	1760	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 3 79/256"	1' 1"	1' 2 11/64"	2' 8"	0' 0 225/256"	265
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TACO 3HP-1760-250psi	3 HP	1760	250 psi	0' 4 1/8"	0' 3"	1' 5 19/128"	0' 4 15/256"	0' 7"	0' 3 241/256"	1' 3 97/256"	1' 2 11/64"	2' 8"	0' 0 37/64"	295
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TACO 10HP-3500-250psi	10 HP	3500	250 psi	0' 4 1/8"	0' 3"	1' 5 19/128"	0' 4 15/256"	0' 7"	0' 4 25/32"	1' 5 241/256"	1' 4 11/64"	3' 3"	0' 0 55/128"	405
TACO 15HP-3500-125psi	15 HP	3500	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 19/128"	0' 3 3/4"	0' 6 3/4"	0' 6 15/32"	1' 6 49/256"	1' 4 11/64"	3' 3"	0' 0 3/4"	510

Media



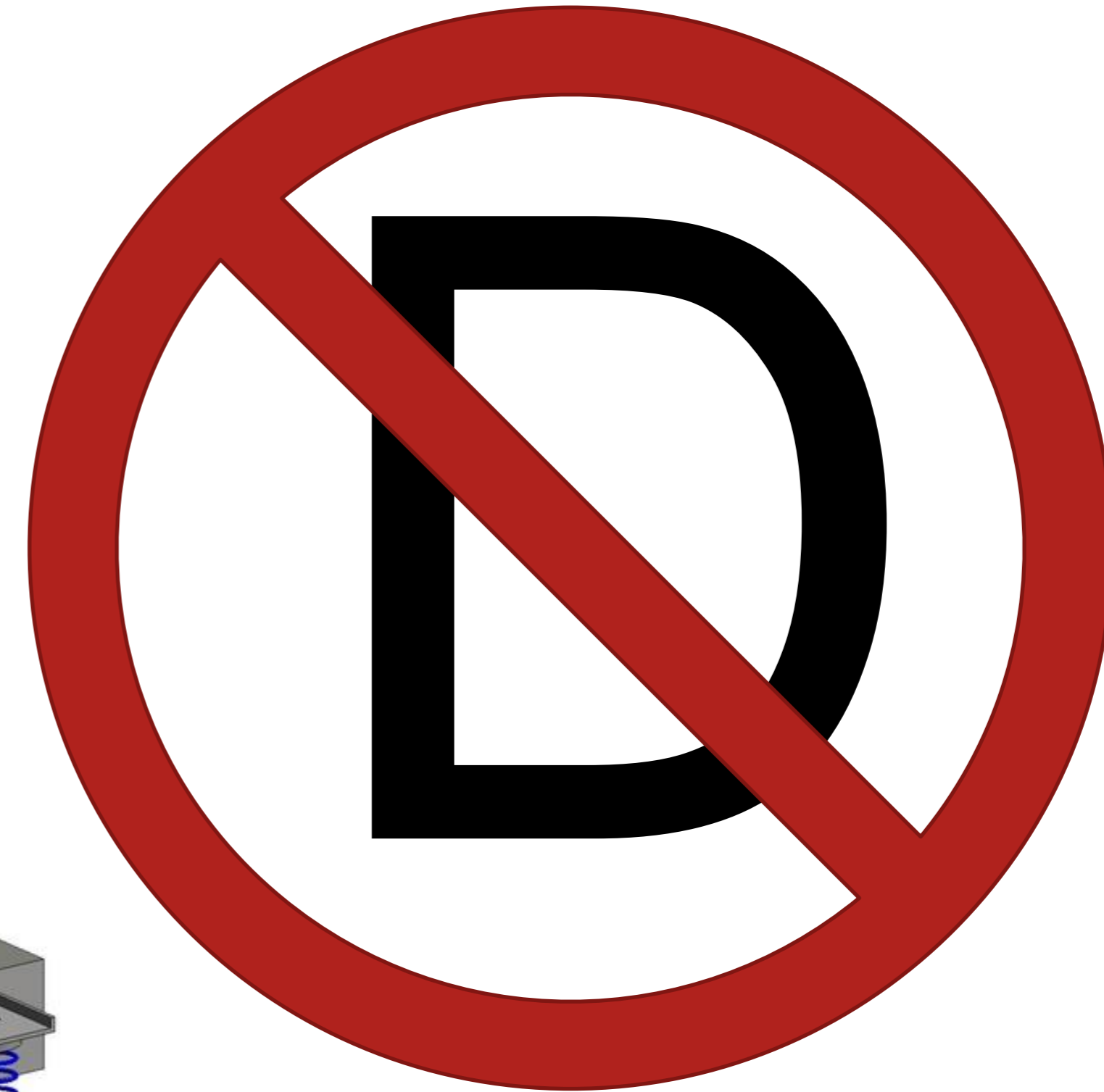
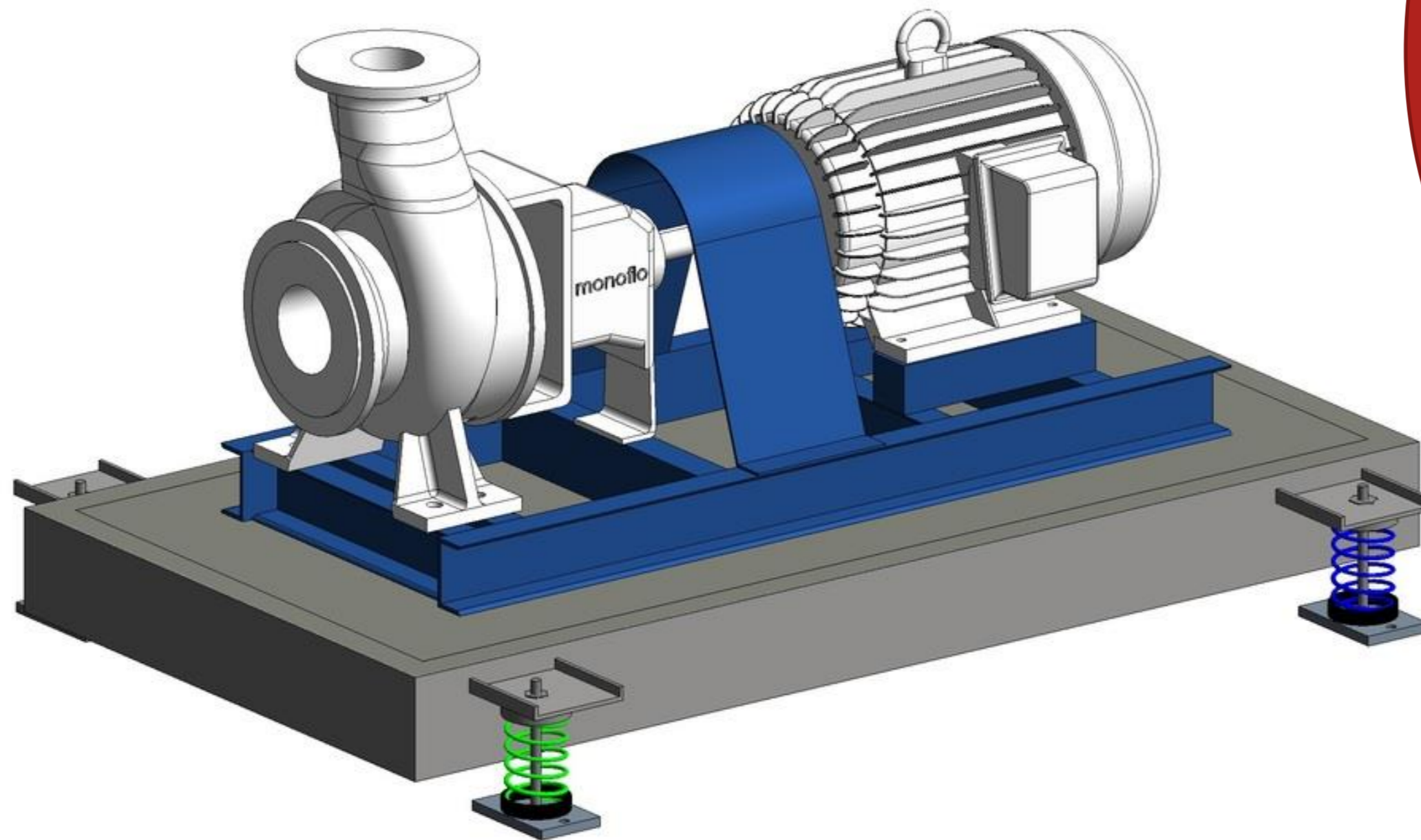
Facilities



Estimating

Too Many D's

- + 5D Estimation
- + 6D Facilities
- + 7D LEED/Sustainability



BIMM



(b)INFORMATION(m) for Project Management

- + Export of all model elements to organized database structure
- + Sort, group and filter to review based on any set of information
- + Collaborate around information across your team



The screenshot displays a software interface with a data table and a properties panel. The table has columns for Quantity, Unit, Count (EA), Area (SF), Volume (CY), Perimeter (LF), and Length (LF). The properties panel on the right is titled 'Assemble Properties' and includes sections for 'Analytical Model' and 'Analytical Properties'.

Quantity	Unit	Count (EA)	Area (SF)	Volume (CY)	Perimeter (LF)	Length (LF)
180.74	SF	75				
338.00	LF	168				
37,307.52	SF	515				

Assemble Properties

Activity ID
Bid Package
Cost Code
Issues/Comments
Location
VE Option
Zone/Area
Quantity Area (SF)
Unit Cost
Total Cost
Color Override

Model Properties

Instance Type
Changes affect all type instances

Analytical Model

E283_Air_Infiltration
E330_Structural Test Pressure
E331-E547_Water_Penetration

Analytical Properties

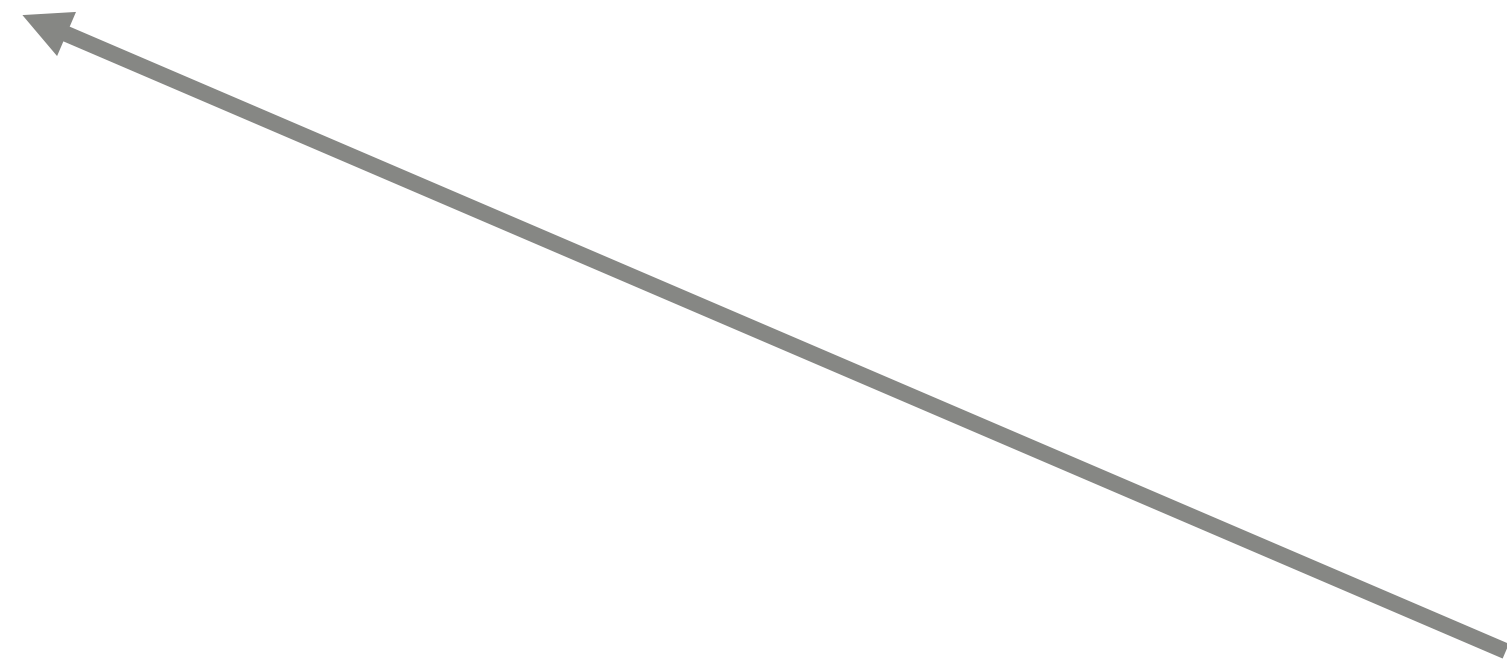
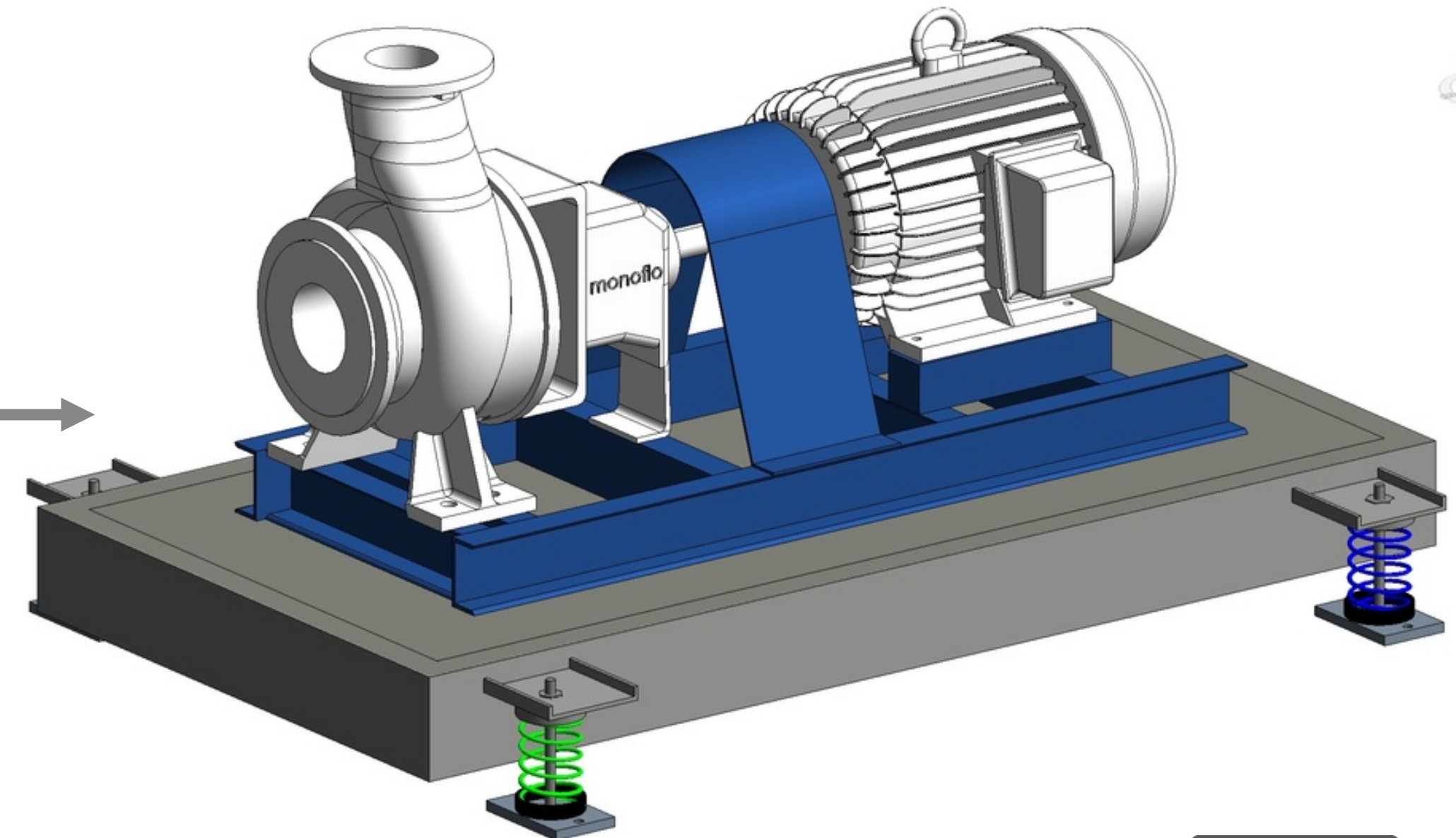
Analytic Construction <Multiple Values>
Heat Transfer Coefficient (U) <Multiple Values>
Solar Heat Gain Coefficient <Multiple Values>

Cancel Save



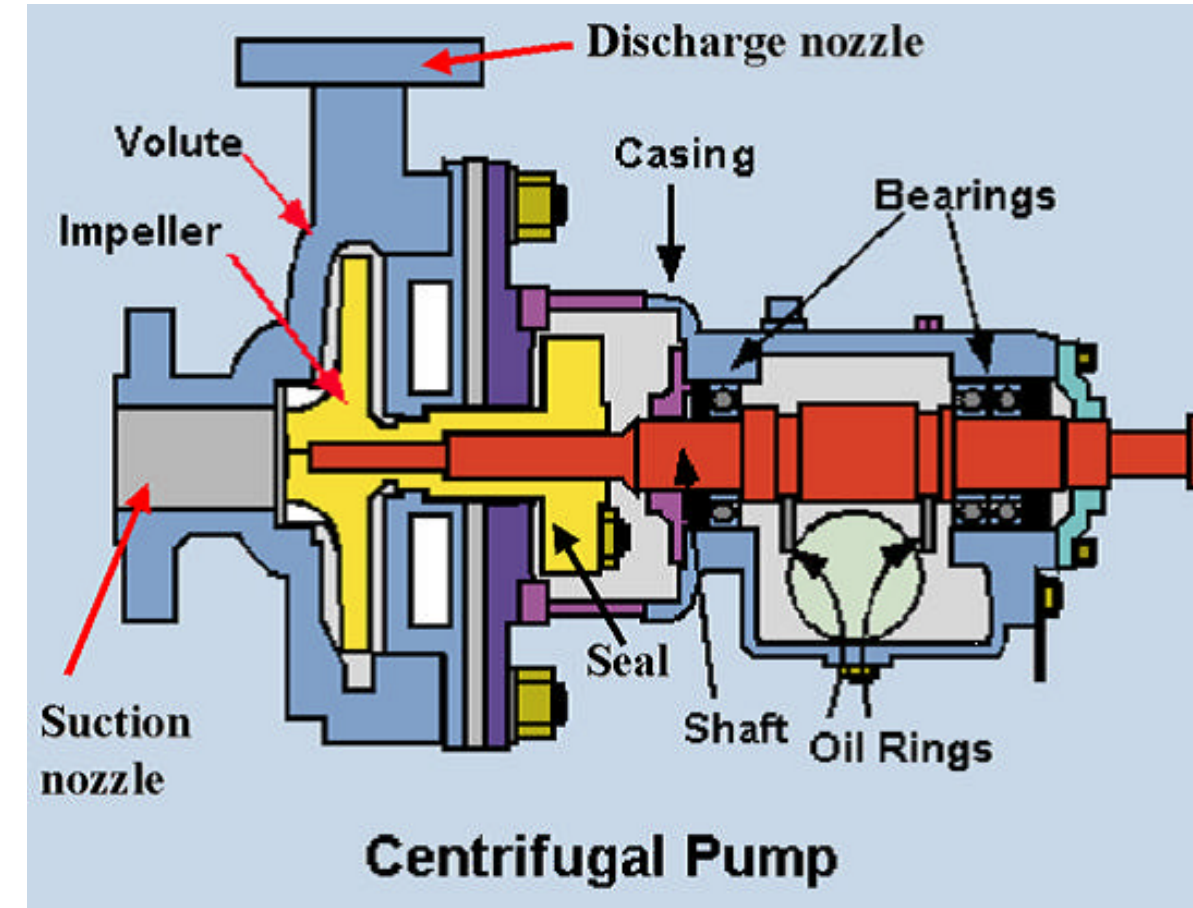
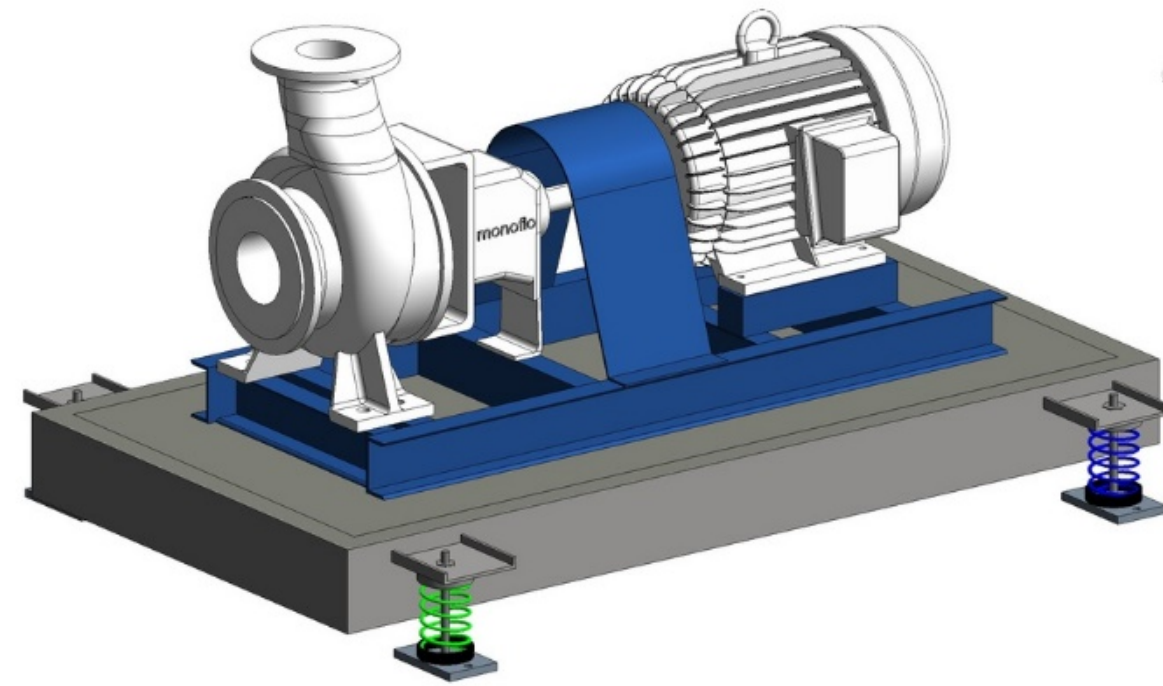
- + Documentation
- + Parametric data
- + Media

**Instant access to
all information**



P-105 HVAC in line pump

Service Date	Equipment	Result
10/12/16	Valve	Pass
10/16/16	Filter	Fail



Submittals/RFIs/Warranty



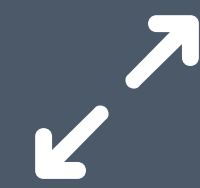
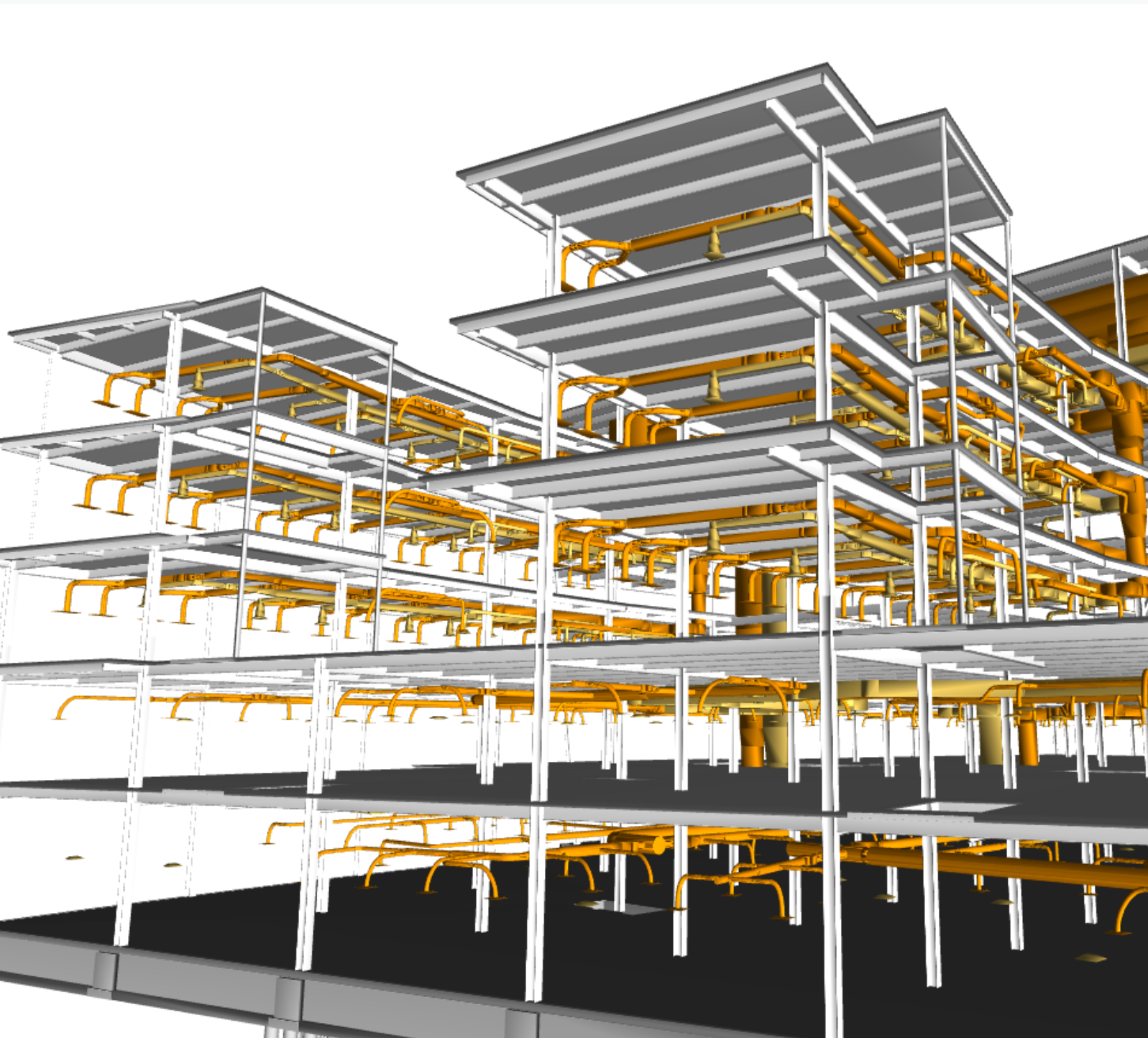
Specify Types

Family: P11507.rfa

Type	Horsepower	Motor Speed	Working Pressure	Suction Flange Radius	Discharge Flange Radius	Suction Flange Length	Suction Flange Length from center	Discharge Flange Length	HP Radius	Motor Height	Base Width	Length of Base	Right Edge of Base	Weight
(all)	(all)	(all)	(all)	(all)	(all)	(all)	(all)	(all)	(all)	(all)	(all)	(all)	(all)	(all)
TACO 5HP-1160-125psi	5 HP	1160	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 1/8"	0' 3 3/4"	0' 6 1/2"	0' 3 7/8"	1' 11 1/4"	1' 21 1/4"	2' 0"	0' 0 225/256"	229
TACO 3HP-1160-250psi	3 HP	1160	250 psi	0' 4 1/8"	0' 3"	1' 5 5/8"	0' 4 15/256"	0' 7"	0' 3 7/8"	1' 24 1/2"	1' 21 1/4"	2' 0"	0' 0 37/64"	255
TACO 75HP-1160-125psi	75 HP	1160	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 1/8"	0' 3 3/4"	0' 6 3/4"	0' 3 7/8"	1' 24 1/2"	1' 21 1/4"	2' 0"	0' 0 225/256"	265
TACO 75HP-1160-250psi	75 HP	1160	250 psi	0' 4 1/8"	0' 3"	1' 5 5/8"	0' 4 15/256"	0' 7"	0' 3 7/8"	1' 24 1/2"	1' 21 1/4"	2' 0"	0' 0 37/64"	265
TACO 1HP-1160-125psi	1 HP	1160	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 1/8"	0' 3 3/4"	0' 6 3/4"	0' 3 7/8"	1' 11"	1' 21 1/4"	2' 0"	0' 0 225/256"	265
TACO 1HP-1160-250psi	1 HP	1160	250 psi	0' 4 1/8"	0' 3"	1' 5 5/8"	0' 4 15/256"	0' 7"	0' 3 7/8"	1' 11"	1' 21 1/4"	2' 0"	0' 0 37/64"	265
TACO 15HP-1760-125psi	15 HP	1760	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 1/8"	0' 3 3/4"	0' 6 3/4"	0' 3 7/8"	1' 24 1/2"	1' 21 1/4"	2' 0"	0' 0 225/256"	265
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TACO 2HP-1760-125psi	2 HP	1760	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 1/8"	0' 3 3/4"	0' 6 3/4"	0' 3 7/8"	1' 11"	1' 21 1/4"	2' 0"	0' 0 225/256"	265
TACO 2HP-1760-250psi	2 HP	1760	250 psi	0' 4 1/8"	0' 3"	1' 5 5/8"	0' 4 15/256"	0' 7"	0' 3 7/8"	1' 11"	1' 21 1/4"	2' 0"	0' 0 37/64"	265
TACO 3HP-1760-125psi	3 HP	1760	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 1/8"	0' 3 3/4"	0' 6 3/4"	0' 3 7/8"	1' 24 1/2"	1' 21 1/4"	2' 0"	0' 0 225/256"	295
TACO 3HP-1760-250psi	3 HP	1760	250 psi	0' 4 1/8"	0' 3"	1' 5 5/8"	0' 4 15/256"	0' 7"	0' 3 7/8"	1' 24 1/2"	1' 21 1/4"	2' 0"	0' 0 37/64"	295
TACO 7.5HP-3500-125psi	7.5 HP	3500	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 1/8"	0' 3 3/4"	0' 6 3/4"	0' 4 25/32"	1' 3 9/256"	1' 4 11/64"	3' 3"	0' 0 3/4"	385
TACO 7.5HP-3500-250psi	7.5 HP	3500	250 psi	0' 4 1/8"	0' 3"	1' 5 5/8"	0' 4 15/256"	0' 7"	0' 4 25/32"	1' 3 9/256"	1' 4 11/64"	3' 3"	0' 0 55/128"	385
TACO 10HP-3500-125psi	10 HP	3500	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 1/8"	0' 3 3/4"	0' 6 3/4"	0' 4 25/32"	1' 5 241/256"	1' 4 11/64"	3' 3"	0' 0 3/4"	405
TACO 10HP-3500-250psi	10 HP	3500	250 psi	0' 4 1/8"	0' 3"	1' 5 5/8"	0' 4 15/256"	0' 7"	0' 4 25/32"	1' 5 241/256"	1' 4 11/64"	3' 3"	0' 0 55/128"	405
TACO 15HP-3500-125psi	15 HP	3500	125 psi	0' 3 1/2"	0' 2 1/2"	1' 5 1/8"	0' 3 3/4"	0' 6 3/4"	0' 4 15/32"	1' 4 46/256"	1' 4 11/64"	3' 3"	0' 0 3/4"	410

Select one or more types on the right for each family listed on the left

Communication around Federated Project Data



All project properties in the model



All models, and all versions grouped, filtered, sorted



All team members collaborate online



All standard driven templates, reports, and analysis

A person wearing a white lab coat is holding a tablet computer. The image is overlaid with a white border and a semi-transparent orange filter. The text "Technology Evolution @ Robins & Morton" is centered over the image.

Technology Evolution @ Robins & Morton

Questions?



EMAIL

sales@assemblesystems.com
sales@procore.com



PHONE

855-646-4868
866-477-6267



WEBSITE

www.assemblesystems.com
www.procore.com



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Presented by

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