

Linear Bearing CAD Models and More — On the Fly

Toru Kaneko, director of operations, NB Corporation of America

Smartphones are at the heart of the IoT digital transformation of industry, which is automating more engineering activity. They accelerate processes because data is instantly accessible via mobile apps, which can enhance performance with analytics and now, can put CAD at an engineer's fingertips—literally in the engineer's pocket.

The linear motion control industry is being revolutionized by mobile app capabilities; e.g. — putting products and specification information at an engineer's fingertips; interchange one manufacturer's component for another's in a design; and download CAD models right onto the phone or tablet, in seconds—whereas the average time to download a CAD model on a computer is 15 minutes.

Broken is the chain to catalogs and computer screens that kept engineers at their desks and product representatives weighed down with papers and computers. Using mobile apps, engineers can brainstorm anywhere a meeting is called, trade show presentations can be customized to a visitor's needs, spec sheets and CAD can be downloaded, printed and emailed faster than from a website.

Engineers Always Have a Mobile Phone in Their Pocket

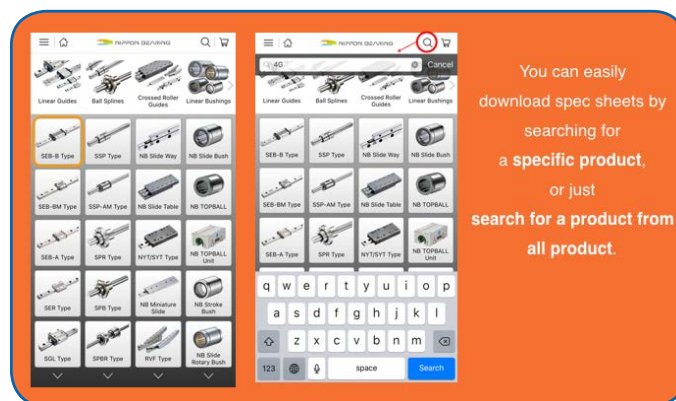
Even though design engineers may be designing on one, two, or maybe even three computer screens, they still have yet another screen in their pocket, i.e. — a phone screen. This screen is being used in motion control design to speed the incorporation of components into the design process.

Whether engineers know what component they need and just want the CAD model, or need to look up a linear guide, slide or ball spline in a catalogue, they can now do it easier and faster from a mobile app than from a website.

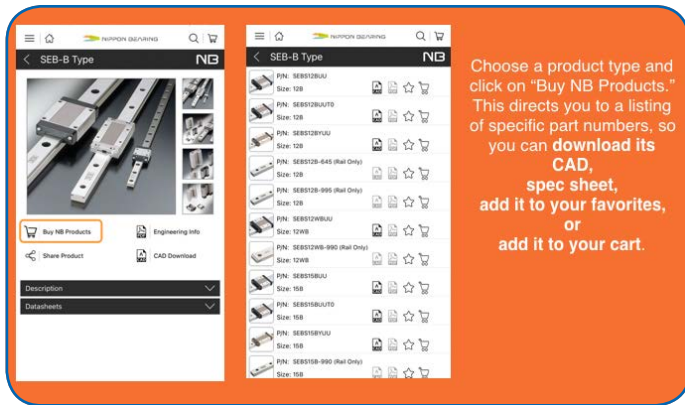


Easy Product Interchange

In fact, from an app, they can interchange one manufacturer's component for another's by entering the product number of the linear bearing into the interchange function—and up pops another manufacturer's comparable product number. All of this without taking up screen space on their computers.



You can easily download spec sheets by searching for a specific product, or just search for a product from all product.



Easier, Faster CAD — and More Compatible Formats

Downloading CAD is quick and instantly usable because it's in the native CAD format desired. So, in addition to end users not having to either recreate the 3-D model manually or start by looking at a 2-D drawing, they won't be given a format that isn't compatible with their system. Typically, the apps have over 20 native and neutral formats available.

Automated Calculations

How long will your linear guide last? On at least one mobile app there is a rated life calculator. It easily calculates the life of a specific product that the viewer has identified, such as one from NB's Slide Guide series. You can print or email the results in a PDF format.

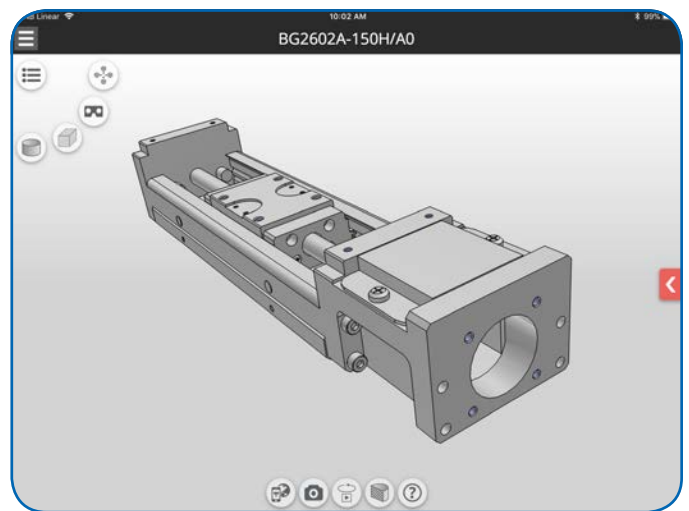


Why Mobile Is So Fast

Dan Koivisto, a technical consultant for CADENAS PART-solutions — a leading software developer and online CAD catalog provider, describes creating the CAD catalog for just such an app. "We're the engine behind the CAD, but we don't have static CAD models stored; we create them on the fly — as configured and requested by the customer. This approach is very 'lightweight' and versatile, which is why they are so accessible via mobile devices and email. This is how

'NB Linear,' Nippon Bearing's app, is able to provide instant 3-D previews and instant downloads in hundreds of 2-D and 3-D formats."

Typically, engineers will figure out what part they want aided by the app; check specifications; download the CAD model; and email it to their computer. Next, they will call or email the manufacturer to actually order it. The manufacturer forwards the order to a local distributor for quick fulfillment. If the engineers have questions, the app emails the manufacturer while they are still on it.



How to Use an App to Identify the Right Product

On the NB Linear Mobile app, you begin the process of identifying what you need by choosing a product type and clicking on "Buy NB Products;" this directs you to a listing of specific part numbers. Or, if you have a product part number, enter the part number or series name in the search icon on the top menu so you can download its CAD spec sheet, add it to your favorites, or add it to your cart.

Or Interchange One Product for Another

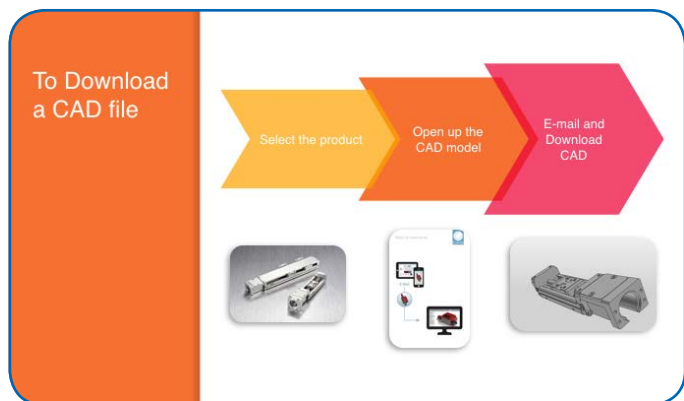
If you want to find NB's product that will be interchangeable with a different manufacturer's product, the NB Linear Mobile app lets you choose from various manufacturers. From the menu bar, select "Product Interchange." Choose a manufacturer and partially enter a part number or enter the full part number, and click "Go;" now you can download the part's spec sheet or CAD. Of course, once the NB part number is identified and entered into the CAD download function, the eCAT Viewer software by Cadenas launches and can be configured and emailed in seconds.

Sales Engineers and Distributors Benefit

Brian Pinkham, NB's national sales manager, notes that in fact some distributors no longer use NB's website; they just use the NB Linear Mobile app because it is just so much quicker.

If a distributor is using it, they already know what they are looking for. The customer can tell the distributor a part number from another company and the distributor can, for instance, use the interchange function to obtain an NB part number. He can immediately interchange right then and there on the app and send the customer a CAD within 5 minutes.

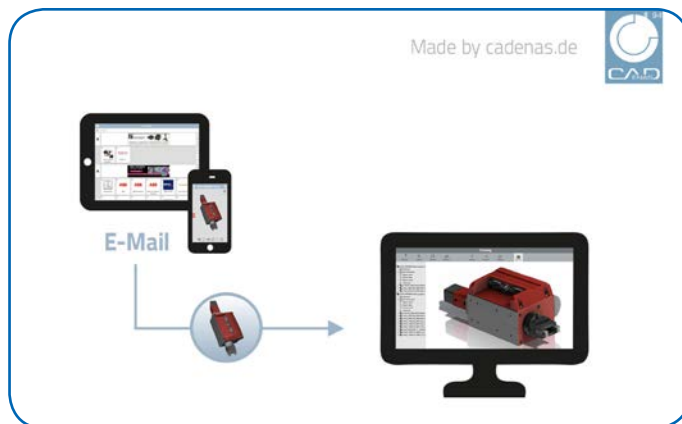
Pinkham says, "I use the app for all of my CAD, now. It's quicker to download via the app than it is from the website. I also use it for all my PDF catalog sheets. If the customer wants a copy of a catalog page, I can have it emailed to myself within 30 seconds; it's really quick. I also use it for interchanges as well. I can take a competitive part number, put it in the interchange, and it will give us our part number."



"I've downloaded CAD while with prospective customers. We've downloaded them at trade shows to show them how quick it is. We show them how you can do it on your phone or your tablet. I can have the CAD downloaded within a minute. If you know the part number, if you know exactly what you are looking for — it is really quick."

Old Habits are Hard to Change

If you think about it, smartphones are not all that old. They have effectively been around for 10 or 15 years, as we know it. The technology has been the reserve of retail brands. So utilizing and implementing mobile technologies is very new to the industrial manufacturing sector, but that's the way things are moving. Research has moved to the web; you can Google anything on your smartphone. And now an engineer can test fit a component by downloading, via a mobile app, the CAD model, which is then sent to be tested in a desktop design.



People are set in their ways, so even though using the app is faster and easier — whether you're talking about big distributors, sales engineers, or even older engineers — they are still going to their computer and downloading a PDF or going to the website for CAD. But this is going to change.

Some numbers to keep in mind:

- A \$350 billion "bring your own device" market is forecast by 2022.
- CAD downloads grew to 260M downloads in 2017 — a 25% increase from 2016.
- 700 manufacturers worldwide are using digital catalogs.
- According to Penton's *Machine Design* magazine, 76% more manufacturers will be using smart devices by 2019.

Other Functions

Of course an industrial company's mobile app provides a wealth of information beyond product specs and CAD models. Mobile apps automatically find a company's closest location. NB Linear's Mobile app has the latest news and exhibition schedule, which can be announced via push notifications. Tradeshow schedules can be added to your calendar in mobile devices. Products can be added to the favorite product list from product search and product interchange. You also may be able to access social media from the app. **PTE**

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