

PUSH2OPEN solution for IKEA MAXIMERA drawers

North America | SEKTION System | USA & Canada



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If you still have questions after reading this document or would like a copy of the detailed installation instructions, then please do not hesitate to contact me directly at: mike@push2open.org



Quick Summary

There's a lot of useful information in this guide for those who need it. More information and videos are available on the website too on the home page and specifically on these pages:

<https://www.push2open.org/test> - Videos & additional PDFs
<https://www.push2open.org/install> - Installation Q&A

This section serves as a quick 5 minute summary of all that's included in the following 15 pages:

The PUSH2OPEN solution converts any IKEA SEKTION system with MAXIMERA drawers into a handle-less kitchen, where drawers are lightly pushed to trigger a high-quality mechanism that smoothly glides even the heaviest drawers open.

Based on the Blum® tipon BluMotion system developed for high end kitchens, the system is simple to install, being purely mechanical and hence requiring no batteries or electrical connections.

It also retains the soft close nature of the MAXIMERA drawers.

PUSH2OPEN can be easily installed in either pre-built or new build kitchens. It includes a foolproof installation template and requires only 3 additional standard tools and approximately 10 minutes to effort to convert each drawer to a push-to-open drawer.

The solution is ordered in two parts: The Blum® actuators & Sync rods are ordered from one of many online distributors and then the Ikea interface parts and installation kit is directly ordered from the PUSH2OPEN website. This complete ordering process is greatly simplified by an online automated tool at which you simply supply all your drawer dimensions. The tool then works out what Blum® parts need ordering and suggests online distributors and auto generates a shopping basket for the PUSH2OPEN parts you will need.

Complete cost for the solution is approximately: [*number of drawers* x \$32.50] + \$195 for the installation kit. Shipping is extra but usually less than \$10 with the USA and approximately \$20 to Canada.

PUSH2OPEN orders ship within 3 days of receipt and standard shipping typically takes an additional max. of 3 days for USA and 7 days for Canada (your mileage may vary).

Customers receive detailed printed instructions for installation and have 30 days to return the PUSH2OPEN items for a full refund if they are at all unhappy with the solution – but nobody ever does.



1. Why PUSH2OPEN?

When I created my own kitchen, I was very keen to manage the costs which can quickly spiral ruinously out of control. This is probably the space that's responsible for the most expensive remodel in the home. With that in mind, I settled on an IKEA kitchen because I honestly believe that their SEKTION kitchens are just as high quality as any bespoke plywood construction that's probably going to cost you two to three times the cost of an Ikea kitchen. Plus, the fit and finish are great if carefully installed and they come with a cast iron 25-year warranty!

The high-volume nature of IKEA coupled with the significant resources applied to proper stress testing delivers the sort of reliability that is difficult to achieve in many low volume kitchen designs.

Unfortunately, high volume also tends to deliver limited design choices. So, when I decided that I wanted a totally modern kitchen without handles and with lots of drawers, I was disappointed to discover that IKEA had no real solution for opening a handle-less drawer front that was truly flat.

Standard solutions to this problem, neither particularly acceptable to me, were:

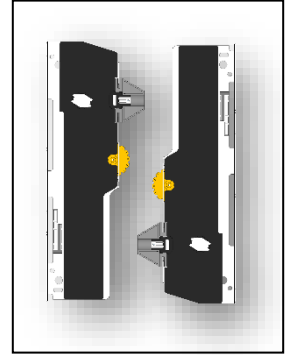
1. A limited range of panels with integrated handles (eg. IKEA *Voxtorp*). These do not deliver to the spirit of a true handle-less design in my opinion.
2. Using IKEA's *Utrusta* range of push open sticks. These work great for doors (and their description on the website specifically mentions door use) but their performance on drawers is disappointing. Besides the fact that, if mounted on either side of a drawer, they tend to trigger independently resulting in asymmetric force leading to uneven or only partial opening, they also completely defeat the very nice soft close feature of *Maximera* drawers!

I started to consider my options and looked around at how it's done on the high-end German kitchens from Poggenpohl, SieMatic and the like. There are two methods by which this problem is solved on these \$100K+ high-end kitchens:

1. **Aluminium profile rails** cut into the cabinet creating a discrete channel allowing you to get your hand behind the drawer front edge to pull it open. The challenge? You need to cut into your IKEA cabinets to create the integration space for these channels – which is nontrivial. It's still potentially the only solution for a true handle-less refrigerator today and often a solution for dishwashers, although 'knock to open' mechanisms are also gaining popularity for the latter. I've done this in parts of my kitchen so, if you want more details then drop me a line.



2. **Professional high-end mechanisms** fitted to each side of the drawer, enabling it to be opened with a simple inward push of the drawer front. The drawer opens extremely smoothly, and the mechanisms are rated to operate with drawer loadings of greater than IKEA's upper limit of 25kg (55lbs) for Maximera. The mechanisms include synchronization elements so that irrespective of whichever mechanism is first triggered by pushing on the drawer front, it immediately triggers its partner mechanism on the other side of the drawer. The result is a very smooth opening as the drawer is pushed with equal force from both sides. These mechanisms are also fully compatible with the standard Maximera 'soft close' drawer runners.



Seems like I had my answer. The challenge is that these mechanisms, manufactured by European companies such as BLUM®, are designed to be fitted to bespoke, rather expensive drawer systems that must be tailormade to size. The resulting cost to implement drives kitchens back into the high-end price category we were trying to avoid in the first place.

The solution was to design a system that would allow these relatively cheap BLUM® TipOn BluMotion drawer mechanisms* to be fitted to an Ikea kitchen using basic DIY tools and a simple, fast, accurate, and reliable method.

This is what the PUSH2OPEN solution delivers; your modern truly handle-less kitchen with high-end push open/soft close Maximera drawers. All at Ikea prices!

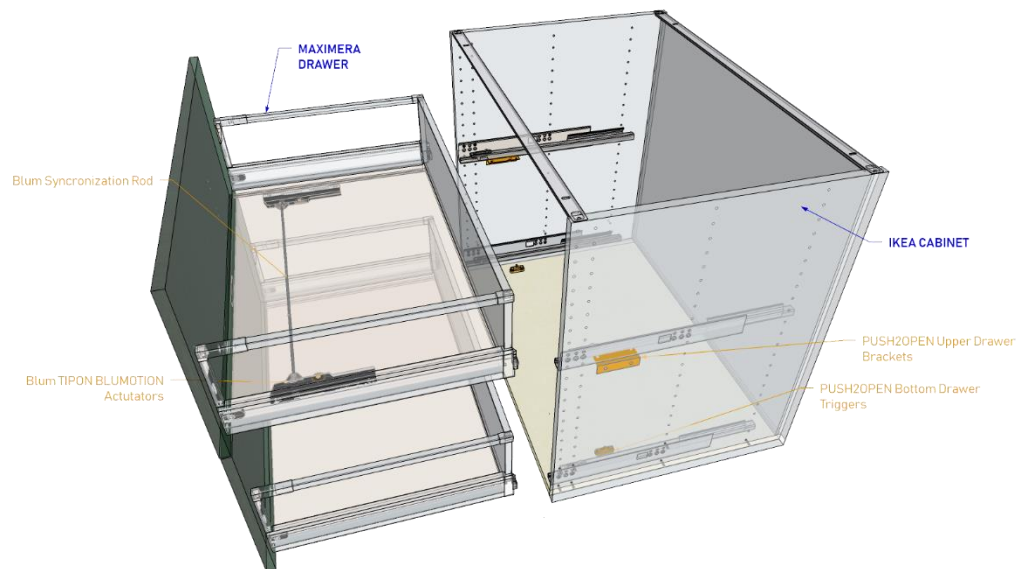


*<https://www.blum.com/us/en/products/motion-technologies/tip-on-blumotion/overview/>

2. Overview of the System

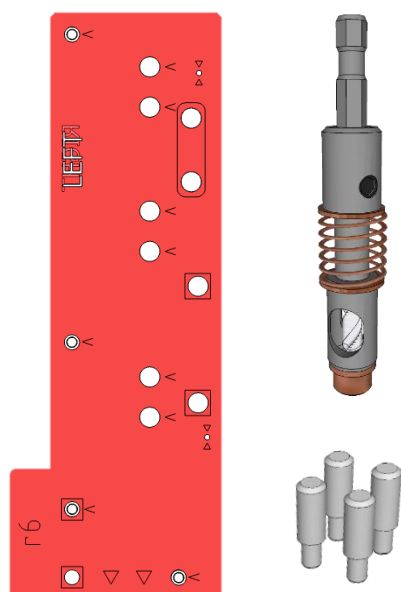
The PUSH2OPEN system is completely compatible with your existing IKEA kitchen or a brand-new Ikea install. The system is an addition to the standard parts provided by IKEA, it does not replace any of them. It is fitted to regular Maximera drawers mounted on regular Maximera drawer runners fitted within regular Ikea Sektion cabinets.

The image below depicts an install in a standard 30" Ikea Sektion base cabinet, in this case configured with two 15" high drawer fronts.



Note the additions to the standard Ikea build, identified in orange. These are parts of the PUSH2OPEN system. They consist of:

- i. Blum® under drawer mechanisms (actuators) and a sync rod to connect them together. This sync rod ensures that wherever you push the drawer front, both actuators will trigger, delivering an exceptionally smooth and even opening force applied to both sides of the drawer.
- ii. A pair of metal brackets mounted to the sides of the Sektion cabinet for each upper drawer. These are precisely located and hold triggers which interact with the drawer mounted actuators.
- iii. A pair of resin cast single piece triggers that work exclusively with bottom drawers.



It is of critical importance that parts i – iii are mounted precisely with a tolerance of no more than 1mm (~ 1/32").

This is made possible by a precisely machined acrylic installation template that ensures all pieces are accurately mounted for best & reliable operation.

The install kit also includes a special 5mm drill bit with an automatic depth stop. This ensures that the mounting holes drilled for attachment of the parts are not just in the right place they are also at exactly the right depth.

Not illustrated are a standard 1/16" twist drill and a pozi-drive screw tip, which are also included in the kit.

Installation requires only three readily available tools:

1. A standard power drill/screwdriver with a clutch which is used to drill the required 8 holes required for each drawer conversion (4 on the underside of the drawer and 4 on the cabinet).
2. A #6 Phillips type screwdriver used for attaching the Blum® actuators with to the underside of the drawers with the small 1/2" screws.
3. A small handheld hacksaw or cabinet saw to cut the sync rods to size. You can use a table saw if you have access to one, although it is not necessary.

3. Installation Considerations

Shifting the Drawer Boxes relative to the Front Panels

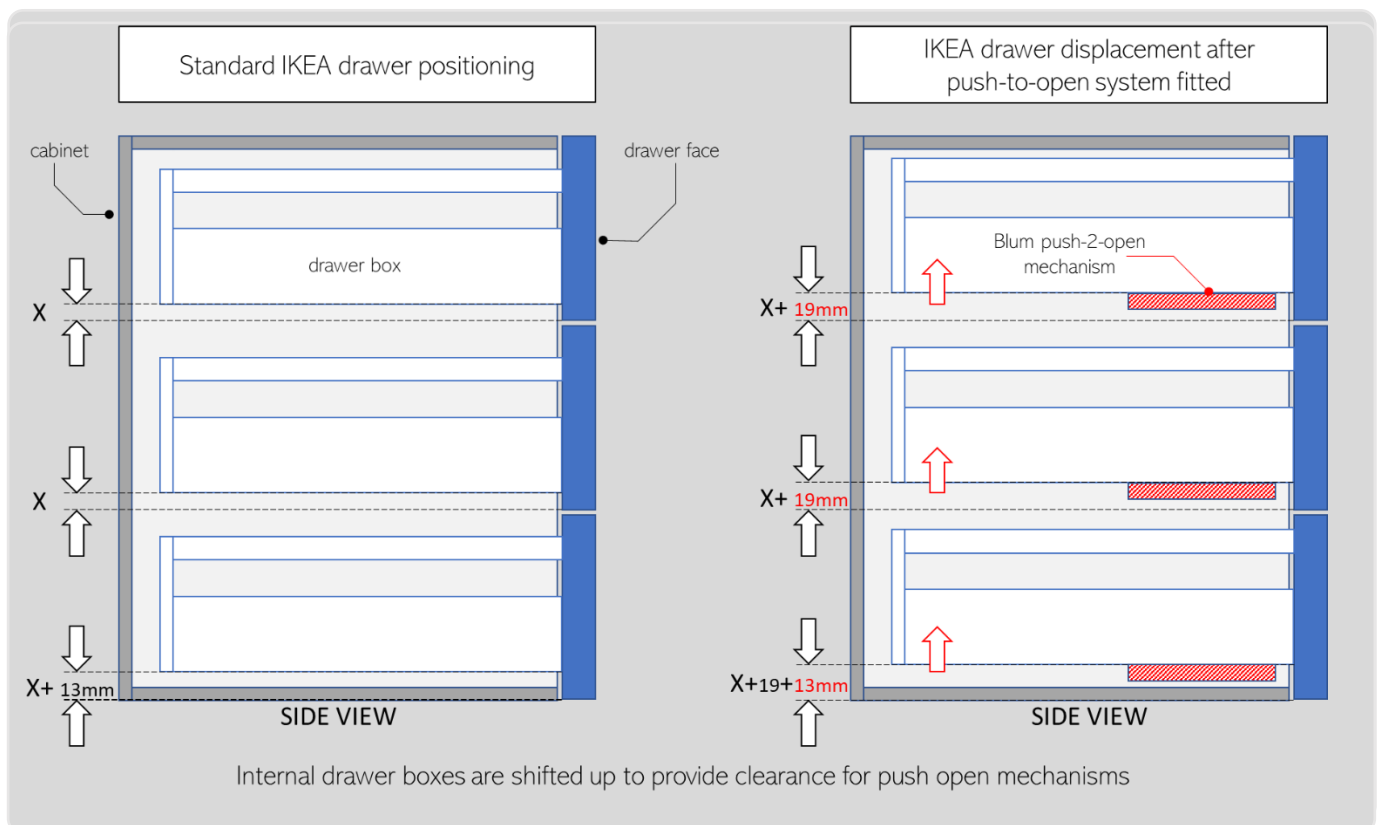
Since the Blum® actuators are mounted to the underside of the drawers, it is critical that they have sufficient space so that when a drawer is opened these components do not rub against or interfere with the base of the cabinet (in the case of bottom drawers) or the top edge of the drawer front below.

In order to create sufficient space under the drawer so that even when fully laden there are no issues with mechanical interference, it's necessary to shift the drawer box relative to the drawer face up by 19mm (3/4"). This extra space is added to the space available between the bottom of a drawer and the bottom edge of the drawer front, at the expense of drawer head-room (the tallest item that you can now place in the drawer will have just reduced by 3/4"). This generally has little or no implication for most 99% of kitchen designs, certainly not for the large and medium sized drawers. Even the smallest 5" drawers will retain over 82% of their storage volume with this necessary shift.

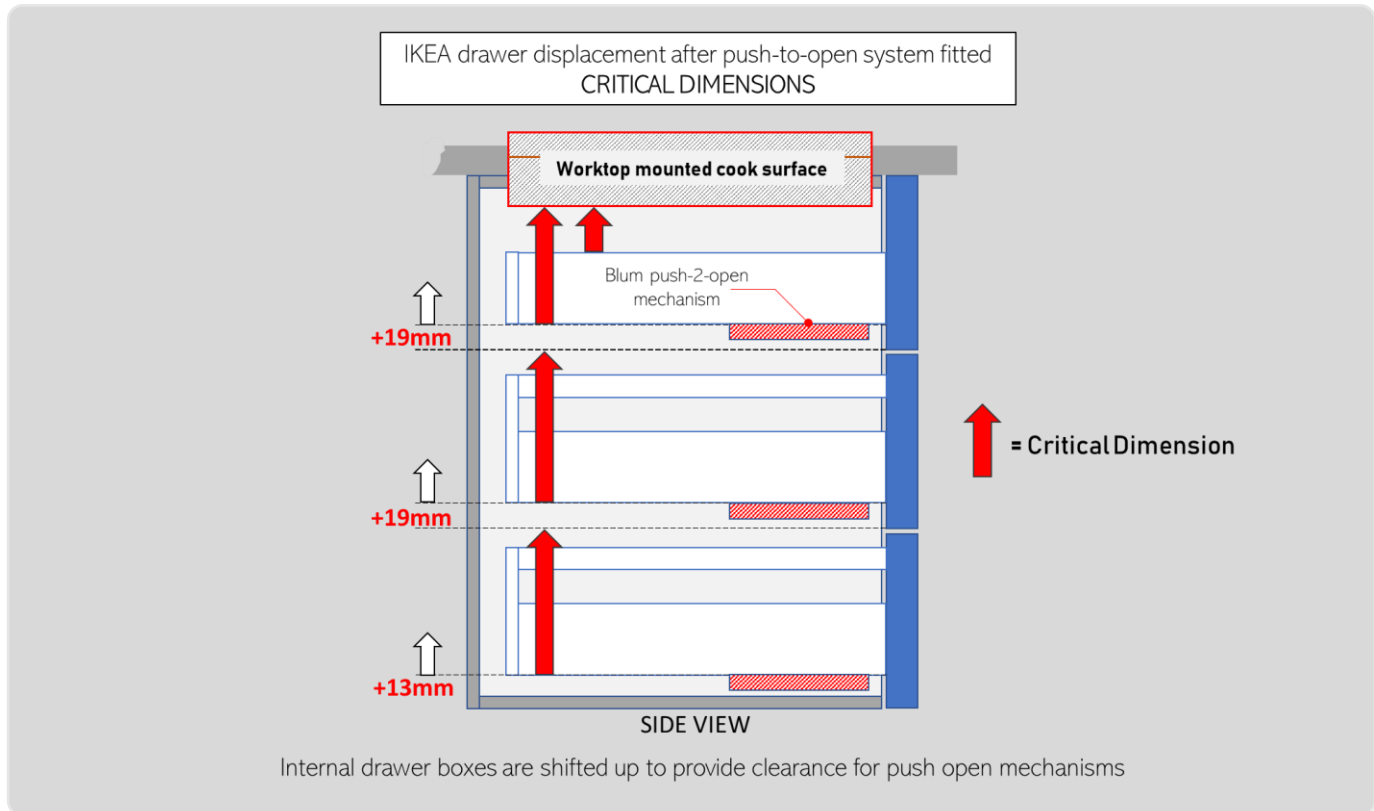
This 19mm (3/4") shift of the drawer boxes does, however, need consideration in the following cases:

- i. **Cooktops/Sinks:** If you have elements that penetrate your worksurface, such as a cook top or sink. Make sure that raising the upper drawer $\frac{3}{4}$ " is not going to cause the highest point of the drawer box to interfere with the cooktop etc.
- ii. **Plumbing:** It's possible that plumbing u-bends may hit against a lower drawer box edge if the box is raised by $\frac{3}{4}$ ". In the unlikely case that this is a problem then it's usually possible to carefully loosen the u-bend pipework and adjust it up enough that it no longer interferes with the pipe.
- iii. **OMLOPP drawer lighting:** If these drawer lights are mounted above a top mounted low height (5") drawer front, there's not much room between the drawer box and the top of the cabinet. Once you shift the drawer up another $\frac{3}{4}$ " there may be insufficient clearance to allow for an OMLOPP strip. This will not be a problem for larger drawers that you plan to illuminate as there is plenty of available clearance.

Note that none of these considerations affect internal drawers. Since these drawers do not get fitted with actuators it's not necessary to raise them by $\frac{3}{4}$ ", they stay where they are.



Shifting drawer boxes to provide clearance for BLUM® TipOn actuators



Critical Dimensions

As mentioned earlier, in the PUSH2OPEN system the Maximera drawer boxes shift up $\frac{3}{4}$ " which means that it's necessary to move the drawer fronts down $\frac{3}{4}$ ", but how is this done? The good news is that for the all upper drawers it's a simple case of using alternative Ikea pre-drilled holes during assembly to achieve this. For bottom drawers in the cabinet you will need to drill some new holes but this is a simple process with the installation kit and the special depth adjusted drill bit which ensures that you cannot drill through your expensive drawer fronts!

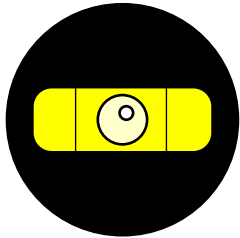
Required gap between drawer front and cabinet (2.5mm / 0.1")

All push to open drawer systems require that there be a small gap between the drawer front and the cabinet face – otherwise you would not be able to push inwards to trigger. The BLUM® actuator hardware instructions defines this gap to be a minimum of 2.5mm (0.1") which is an exceedingly small gap.

There is not much to consider here. In the final stages of installation, you will adjust this gap. Your only real consideration here is that you must adjust UTRUSTA door hinges and door push openers as your final step of kitchen install so that gaps are consistent for drawers and doors and so that as you eyeball down a cabinet run everything looks planar and nothing is sticking out from anything else. This is easily done by simply following Ikea's install and adjustment instructions.

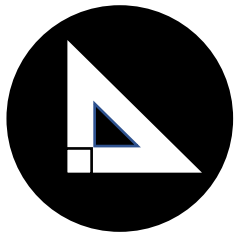
4. PUSH2OPEN Design Considerations

Here are a couple of design aspects to consider before installing the PUSH2OPEN system in your IKEA kitchen ...



Build for Success

As per IKEA's instructions: If you want to get the best performance out of your PUSH2OPEN drawers, make sure that your cabinets are level back to front and side to side.



It is also important to ensure that cabinets are square. Take the time to construct and level your cabinets carefully. It will make your life so much easier for the finishing aspects of your kitchen construction and will give it that professional look.

Compatibility with IKEA Kitchens and Drawers

Prior to SEKTION kitchens, Ikea had a single worldwide system called AKURUM. The PUSH2OPEN system is not compatible with these older kitchen designs. SEKTION was introduced into the USA/Canada in 2016.

IKEA's SEKTION kitchen systems offer two drawer design choices; FÖRVARA and MAXIMERA. The Push2Open system is only compatible with the higher quality MAXIMERA drawers.

The important take-away here: The PUSH2OPEN solution is compatible with **all** SEKTION systems that use MAXIMERA drawers in any country in the world where these product lines are available.



Compatibility with your Kitchen Design

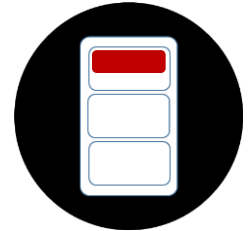
SEKTION drawer fronts come in 3 different sizes and the drawers themselves are also available in 'high', 'medium' and 'low'. The PUSH2OPEN solution is compatible with all combinations of drawer front (including custom fronts) and Maximera drawer size combination. It is also designed to work with garbage

assemblies that use a tall door front (or two drawers bonded together) that is attached to a single drawer at the base of the cabinet.

The system also works with the 12" narrow double drawer (top & bottom) systems that are bonded together and faced with a single tall door front.

What about Interior Drawers?

Interior drawers in your kitchen design are supported by Push2Open, although you won't need to convert these drawers to 'push-to-open' operation since ikea has designed them to be operated without handles anyway.



What about Custom Drawer & Door Fronts?

Some customers decide that the choice of drawer and door fronts offered by IKEA don't really meet their design requirements. These customers look to third party companies to provide a wider range of designs. The PUSH2OPEN system is compatible with these custom drawer/door offerings.

5. How much does it cost?

There are four parts to the solution:

1. BLUM® TipOn Blumotion actuators. These are supplied in pairs, a left and a right, suitable for one drawer. They cost approximately \$17.50 a pair.
2. BLUM® Nylon Synchronization Rods which provide a mechanical connection between left and right actuators to make sure that both get triggered simultaneously. These come in 44" (1124mm) lengths and need to be cut to size, they cost \$5 and are typically long enough for two drawers or three drawers, making the cost per drawer approximately \$2.50.
3. Conversion brackets: These enable the BLUM® hardware to interface with your Ikea cabinets and cost \$12.50 per drawer. They are sold in pairs.
4. The drilling jig kit - this is a one-off purchase that's used to install all the necessary hardware to all your cabinets and drawers. It includes a drilling template and a special drill bit which drills to an exact depth and a regular drill for making starter holes. This template instalaltin kit costs \$195.00

To summarize – the total cost for a kitchen install of the Push2Open system works out at:

$$(\text{Number of drawers to convert}) \times (\$17.50 + \$2.50 + \$12.50) + \$195$$

Total Cost ≈ (Number of drawers* to convert) X \$32.50 + \$195

All prices are quoted in United States Dollars.

*Note that you should only count your external drawers. Internal drawers do not require the Push2Open system to be fitted (and in its present form, the system cannot be fitted to internal drawers)

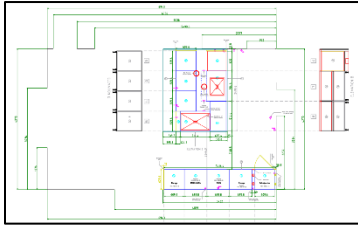
Shipping Costs

In addition to the piece part costs there's also usually a shipping cost involved. I ship from a North West USA location and my ordering website automatically calculates the shipping costs depending upon which option you choose. Cost is calculated by weight and since brackets are lightweight Aluminum or Acrylic typical shipping costs for the average sized kitchen run to less than \$10

Shipments to Canada do not require any customs payments but will typically require sales tax to be paid.



6. How, and what, do I order for my kitchen?



Your first step is to finalize the design of your Ikea kitchen. At this point your kitchen may be a plan on a piece of paper or a fully installed kitchen.

Once you have finalized your design and know the dimensions of each drawer then you are ready to order.

The process for figuring out all the pieces that you need to order is hugely simplified by using the **automated ordering tool** on the PUSH2OPEN website which can be found here:

<https://www.push2open.org/pricing-parts>

The ordering process works as follows:

- i. The Blum® TipOn actuators and sync rods for each drawer need to be ordered from a local distributor. The actuators come in three strengths. The idea is that you pick the appropriate strength of actuator to match the size and weight of the drawer.

You must order the Blum® parts from any online distributor that carries them. Whilst it might seem more convenient to order everything from the PUSH2OPEN website, the reality is that ordering these parts directly will get you the best pricing.

The automated tool on the PUSH2OPEN website will ask you for the detail of all your drawer dimensions. On this basis it will automatically calculate all the Blum parts required and their appropriate strengths. The Sync Rods come in set 44" lengths. The tool works out how to cut all the rod lengths you'll need and optimize the cuts for the minimum number of 44" standard rod lengths to order.

Finally, a complete order list of Blum® component part numbers and quantities will be generated, and the tool will provide recommendations of online distributors with which to place your order based on your location.

- ii. The automated tool will also calculate all the PUSH2OPEN brackets and triggers that you'll need together with the appropriate installation tool kit. These parts are directly ordered from the PUSH2OPEN website.

Using the drawer dimension data that you entered earlier, a shopping cart will be automatically populated with all the parts that you will need and you simply hit the '**ORDER NOW**' button to complete the order by entering your shipping details and payment method.

Automated Ordering Tool

If you are still left in any doubt as to what you need to order, simply drop me a line at mike@push2open.org with your kitchen design.

7. Is it Easy to Assemble?

The solution comes with detailed, highly illustrated instructions. Feedback from customers on installation has been extremely positive and after the usual learning curve for your first drawer, it should take no more than 10 minutes for each subsequent drawer conversion. Of course, if you experience any problems then we are here to help – just send us an email with your questions.



8. How quickly can I get it?

Generally, we operate directly from stock with large inventories of pre-built parts so your order will ship from Portland, Oregon within 3 working days. If there is some unforeseen delay, then we'll send you an email to let you know. These occurrences are rare and typically result in a worst-case addition of 2 – 3 working days maximum since none of our raw materials are on long lead-times.

Standard USPS shipping (usually the cheapest option) takes around 2-3 days to US addresses and between 7 – 10 days to Canadian addresses. There are many shipping options offered so it is possible to pay more for overnight shipping etc.

If your project is on extremely tight schedules, then please send an email to mike@push2open.org. Quote your order number and note in the subject line that the shipment is urgent. In most cases we will be able to guarantee shipment that day, usually within a couple of hours.

For 90% of all typical kitchen designs, your PUSH2OPEN order will ship in an 11" x 6" x 6" box filled with recyclable packaging peanuts. The Blum distributor will also usually ship in a similar sized package. Blum shipments to USA or Canada destinations are usually received within a week. These parts have high availability from multiple distributors and are almost always readily available in-stock.

9. What if I am Unhappy with the Solution?

We have received great feedback on the PUSH2OPEN solution for Ikea kitchens, with delighted customers across the world. You can read some of their reviews on the website and early reviews from the ETSY website presence: www.push2opendrawers.etsy.com

If, for whatever reason, you are unhappy with the PUSH2OPEN system, you can simply return it within 30 days for a full refund. The 30 days starts from the day of receipt.

Simply send an email to mike@push2open.org with your original order number requesting a full refund with some detail of why the final experience is not what you had hoped for.

Once all the pieces have been returned your refund will immediately be processed. But we hope that you'll be just as delighted as all our other customers!



10. Other stuff that you might not care about

Blum® TipOn	Manufacturers recommended drawer weight in kg [lbs]
<p>T60L7570 (L5 strength)</p> 	<p>40 – 70 [88 – 155]</p>
<p>T60L7540 (L3 strength)</p> 	<p>20 – 40 [44 – 88]</p>
<p>T60L7340 (L1 strength)</p> 	<p>20 [44] or less</p>

Blum Actuator details

	WHAT TO ORDER?				Distributor
	Blum® Actuator* L5 strength	Blum® Actuator* L3 strength	Blum® Actuator* L1 strength	Blum® Sync Rods	
Australia	T60L7570	T60L7540	T60L7340	T60L1118W	www.lincolnsentry.com.au www.wilbrad.com.au
Belgium				T60L118W	www.vanhoecke.be
Canada				T60.1125W	www.mcfaddens.com
Denmark				T60L1118W	
France				T60.1125W	www.foussier.fr
Germany				T60.1125W	www.lignoshop.de
Italy				T60.1125W	
Netherlands				T60.1125W	www.meubelbeslagonline.nl
Norway				T60.1125W	http://www.eiklid.no/
Sweden				T60.1125W	www.theofilis.se
UK				T60.1125W	www.manddonline.co.uk
USA				T60L1118W	www.ahturf.com www.woodworkerexpress.com

Recommended Blum® distributors by country

Useful Links:

Information	Link
PUSH2OPEN Website	www.push2open.org
PUSH2OPEN System Overview Video	https://www.youtube.com/watch?v=pFE1En779Bg
BLUM® Actuator Mechanisms, manufacturer information	https://www.blum.com/us/en/products/motion-technologies/tip-on-blumotion/movento/programme/
BLUM® Guide to Actuator Strength	https://279bc2e4-ba19-4566-9878-a4414a12adcb.filesusr.com/ugd/aee746_2b1e814cb0194e5490ab3a5aaf8dfbd0.pdf