

ENGINEERING
TOMORROW

Danfoss

EMEA

Fluid Conveyance **Services Guide**



Value that goes **beyond the hose**

As one of the world's preferred suppliers of fluid conveyance products, we're relentlessly dedicated to helping our customers gain a competitive advantage in a wide array of demanding industries. Whether our customers rely on machines that move, turn, shape, mold, lift, dig, or haul, Danfoss products are there to deliver the performance needed to stay ahead.

To help our customers go further and faster, we developed a broad portfolio of value-added services. Working hand-in-hand on tailored solutions, we use our expertise to help customers harness theirs—freeing them to focus on what they do best.

By streamlining and simplifying component supply and installation processes, we help customers rationalize spending, accelerate productivity, flex with new demands, and outmaneuver competitors. We carefully evaluate each customer's processes and workflow to tell them how they can be optimized, to help to ensure their operations are adding value every day.



Key service benefits

Simplify product supply and ordering processes

Optimize production engineering processes

Improve assembly configurations

Bring down total cost

Achieve complete solutions with a single code
and from a single supplier

Our fluid conveyance services at a glance:

On-site assembly

Rapid prototyping

Kit building

Expedited shipping

Kanban/consignment

UniqID asset tracking

On-site application
engineering

Service overview

On-site assembly



Through on-site hose assembly, we can make a customer's production system faster, more efficient, and more predictable, as well as simplifying their ordering and inventory processes.

Key benefits:

- Enables short lead times and a rapid response to new demands
- Optimizes costs due to reduced logistics and packaging

Rapid prototyping



We can help customers quickly create even high complexity hose assembly prototypes—enabling them to leverage the value of a physical specimen to create more optimized and competitive solutions.

Key benefits:

- Rapidly enables design verification, testing and optimization
- Maximizes product lifetime and performance

Kit building



We use kit building to optimize the customer production process, helping them work faster and more efficiently—making better use of space, simplifying assembly, reducing training demands, and more.

Key benefits:

- Reduces inventory space and costs
- Enables faster assembly and optional direct delivery to line

Expedited shipping



Our expedited manufacturing and shipping service helps clients cope with challenges like inventory errors, breakdowns, or short-term production changes—avoiding delays, higher costs, and unhappy end customers.

Key benefits:

- Enables rapid delivery of urgently needed parts
- Prevents line stops or ramp up issues

Kanban/consignment



Developed to improve production efficiency, Kanban offers a clear advantage for lean and on-time manufacturing. We can create a bespoke logistics solution to meet any customer requirements.

Key benefits:

- Increases productivity
- Reduces inventory demands
- Ensures streamlined and reliable on-time delivery

UniqID asset tracking



UniqID™ asset tracking is our cloud-based tool designed to label, manage, and track hose assemblies. It enables customers to manage their assets like never before—anywhere, anytime—while also meeting OEM compliance requirements.

Key benefits:

- Enables complete asset lifecycle management
- Reduces downtime with fast and accurate maintenance and replacement
- Streamlines record-keeping

On-site application engineering



With on-site support from our experienced engineers at their manufacturing location, customers can reduce the time and cost for new application development and select the most suitable components during prototyping to guarantee an efficient, cost-effective, and competitive solution.

Key benefits:

- Makes application development faster and less expensive
- Expert support ensures an efficient, cost-effective, and competitive solution
- Ideal routing upfront reduces design iterations and later issues



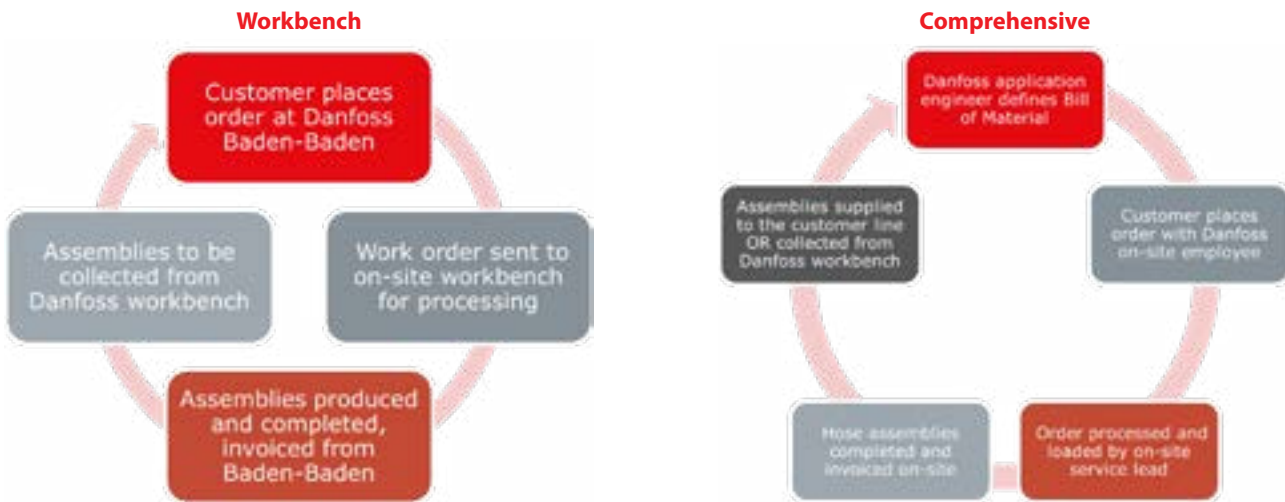
On-site **assembly**

Hose assembly at your facility with our assets

Through on-site hose assembly, we can make a customer's production system faster, more efficient, and more predictable, while simplifying the ordering and inventory processes.

We offer three models for our on-site assembly service: workbench, hybrid, and comprehensive. The first two options can be rapidly implemented with no IT integration and just 800m² of floor space required. Orders are placed electronically and managed by Danfoss in Baden-Baden, Germany, with skilled operators processing orders on-site as required, and daily hose and fittings replenishment based on demand.

Our comprehensive service model enables all activities to take place at the customer site, including assembly quotation, order placement, and any required application engineering. This enables a faster turnaround and less complexity for the customer with a local site lead also on-hand to ensure needs are met. We can also offer fast and cost-effective on-site maintenance for customer equipment.



Benefits:

- | | |
|---|---|
| <p>Fast response and short lead times</p> | <p>Reduced inventories due to thinner margins of error, smaller orders, and less assembly</p> |
| <p>On-site prototyping, kit building, and aftermarket support</p> | <p>Optimized costs due to reduced logistics and packaging</p> |
| <p>Fast and cost-effective on-site maintenance for customer equipment</p> | <p>Production planning through customer ERP system</p> |
| <p>The ability to adjust rapidly to production needs, such as stock changes</p> | <p>Line-side deliveries</p> |

With a wide range of options, our on-site assembly service can flex to meet your specific business needs. We look forward to working with you on a bespoke solution that's fast, competitive, and responsive.



Rapid prototyping

Leverage the value of a physical prototype in a few days

We can help customers quickly create even high complexity hose assembly prototypes—enabling them to leverage the value of a physical specimen to create more optimized and competitive solutions.

Lead times



In just days, our rapid prototyping service can help customers move from a design sketch to a completed prototype. At the input stage, we typically require a 2D drawing, a 3D model, a part description including any reference parts, and machine access to define the components. From there, prototyping usually takes our team 1-2 days for standard parts, 2-5 days for average complexity parts, and 5-10 days for highly complex parts. This includes supporting special requirements like brazing or protective coatings.

In addition, we can verify part performance with functional or field tests. We can also offer customers technical support, field engineering, and on-site training as required to ensure correct assembly, optimal routing, and more.

Benefits:

- Verify the 3D-modelled hose routing in machines with a physical sample
- Identify the most suitable product using Danfoss's application engineering expertise
- An easy, non-bureaucratic order process
- Early-stage performance verification for functional or field tests
- Meet special requirements such as multiple coatings, brazing, etc.
- Free samples, depending on the business case
- Optimize hose assembly length, fittings configuration, and connecting ends to maximize performance and product lifetime

Through rapid prototyping we can solve your unique hose assembly challenges in no time. We can't wait to help you leverage the power of a physical prototype to create more optimized and competitive solutions.

Timeline

Required input

- 2D drawing
- 3D model
- Part description
- Reference parts
- Machine access to define components

Duration

- 24-48 hours for standard parts
- 2-5 days for customized items of average complexity
- 5-10 days for complex parts
- Field engineering included as appropriate

Outcome

- Hose assembly proof tested for pressure
- Crimped hose assembly at one end if further optimization is needed at customer location
- Tube assembly



Kit building

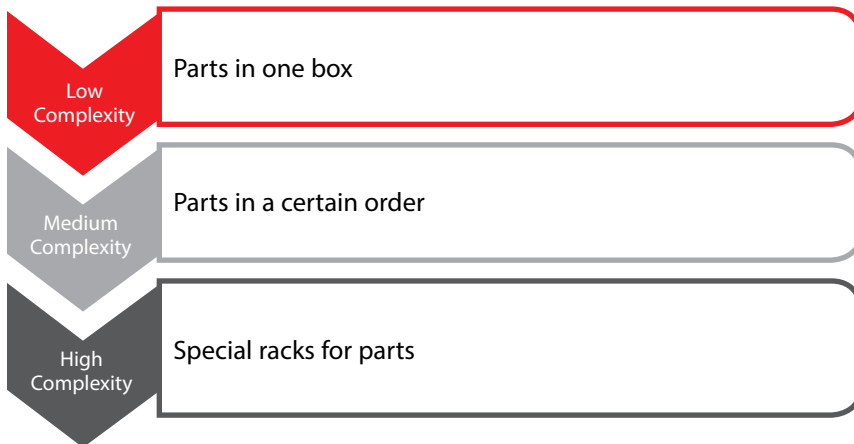
Simplify your logistics to work more effectively

We use kit building to optimize the customer production process, helping them work faster and more efficiently—making better use of space, simplifying assembly, reducing training demands, and more.

Also known as ‘set building’ or ‘kitting’, kit building bundles together similar components or complete systems for a customer in a single shipment. We can offer a variety of solutions for kit building, from simply providing customer-defined parts in one box, to arranging those parts in a specific order, or even delivering special racks or customized shadow boards directly to the assembly line. We can also offer customized markings packaging, and the separation of parts for different docks.

Better control over work in progress by having all necessary parts/hose assemblies in one package.

Kit building options



Additional options:

- Customized markings
- Customized packaging
- Parts separated for different docks
- Kanban/consignment stock
- Delivery directly to cell/line
- Other supplier parts added to the kit

Benefits:

Less space needed in production and assembly areas	A more organized and better used working space
Reduced inventory costs through holistic storage and assembly	Reduced material transport, as no single components are shipped
Easier assembly and no time wasted sorting or searching for components	Better control over work in progress by having all necessary hose assemblies in one package directly delivered to line ... corrected
Easier on-the-job training due to simplified assembly	Direct delivery to line, no picking for single hose assemblies required

Kit building can optimize your production process, helping you work faster and more efficiently. From better using production space and time, to simplifying assembly and training, we can help you become more competitive.



Expedited shipping

Supports you coping with logistic and inventory challenges

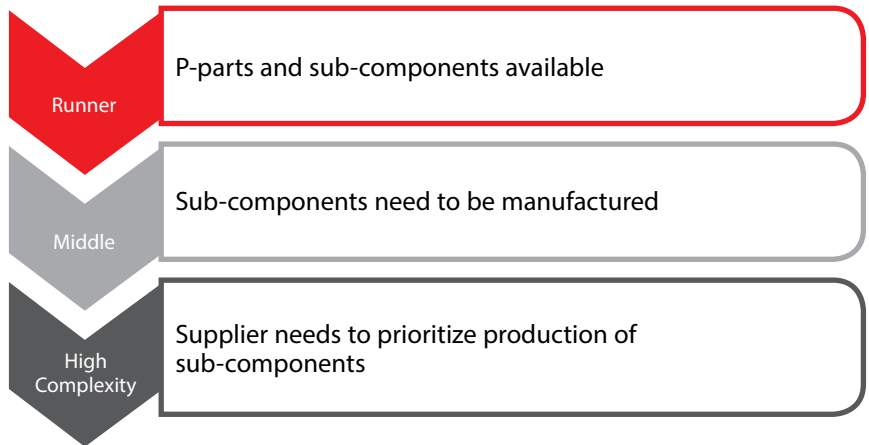
Our expedited manufacturing and shipping service helps clients cope with challenges like inventory errors, breakdowns, or short-term production changes—avoiding delays, higher costs, and unhappy end customers.



Our express delivery option allows customers to receive hose assemblies faster than standard lead times. The starting point for expedited shipping is a conversation with customer services. After discussing the need for express delivery with the customer and learning the part number required, our team will check the available options to offer the best possible delivery date. We will also always confirm our standard lead times before launching the expedited service.

The charging model for our expedited shipping service depends upon the availability of the parts requested and if any manufacturing is required. If necessary, we can oversee both expedited part manufacturing and shipping from our suppliers, as well as expedited sub-assembly production within Danfoss, to ensure parts can be shipped to the customer as quickly as possible.

Expedited shipping categories



Benefits:

- Reduces product lead times
- Parts rapidly available in case of emergency

- Prevents line stops or ramp up issues
- Enables end-customers to be served faster too

Through expedited shipping, we can reduce your lead times and make parts rapidly available in an emergency. We'll help you prevent internal line stops or ramp up issues that cause delays, higher costs, and unsatisfied end customers.



Kanban/**consignment**

Streamline your materials supply

Developed to improve production efficiency, Kanban offers a clear advantage for lean and on-time manufacturing. We can create a bespoke logistics solution to meet any customer requirements.

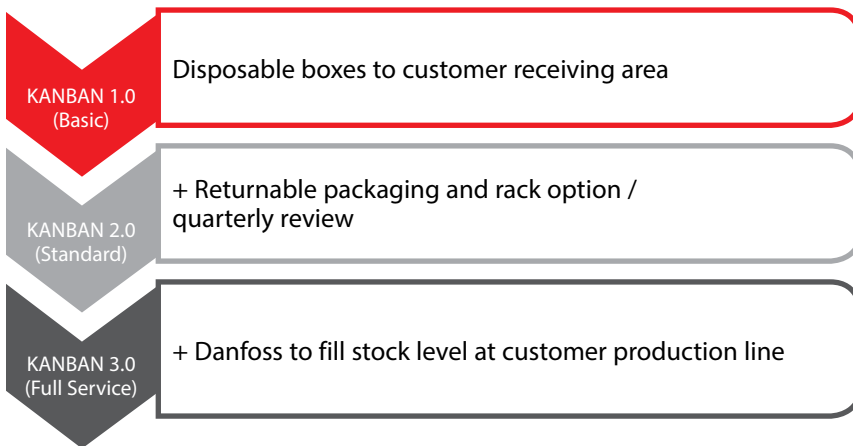
Kanban is a method of production process control that concentrates exclusively on the real demand at the usage spot by enable a reduction of the local inventory. The main goal is the steering of the value chain at their optimal cost at every production step of a multi-level production by asynchronous extraction and supply of a buffer stock. Kanban offers a clear advantage for lean and on-time manufacturing. Together we can create a best fit logistics solution to meet any customer requirements.

The consignment service enables secure planning and production with lower inventory demands and high on-time delivery. Items held at Danfoss are available as stock to the customer, who has sole rights of disposal and will only pay when stock is consumed.

Different customer requirements demand different Kanban solutions, which is why we offer three service levels: basic, standard and full. Our basic service is simple and cost-effective—the customer specifies the minimum stock level in their storage rack and Danfoss provides parts in disposable packaging, freeing them from container management. When notified by the customer about empty boxes, we issue a replenishment order, delivered to the customers incoming goods department.

In our standard service, we provide both racks and packaging, as well as stock control, a quarterly review of demand, and more. In our full service, Danfoss employees will also replenish the customer's consignment stock after delivery.

Kanban options



Kanban/consignment solutions enable secure planning and production with lower inventory demands and high on-time delivery

Benefits:

<p>Increased productivity for serial manufacturing</p>	<p>Faster and more reliable on-time delivery</p>
<p>Reduced inventories, but wider product access</p>	<p>Cost reduction and more free working capital</p>
<p>No lag between using stock and restocking</p>	<p>Higher end-customer satisfaction</p>

We can synchronize our varied Kanban solutions to your specific needs. We look forward to working with you to create a bespoke, lean, and efficient logistics solution that meets the demands of your business.



UniqID asset tracking

Label. Track. Replace.

UniqID asset tracking is our cloud-based tool designed to label, manage, and track hose assemblies. It enables customers to manage their assets like never before—anywhere, anytime—while also meeting OEM compliance requirements.



Through our UniqID service, customers can manage their assets via a smartphone, tablet, or desktop application. We've made it simple to replace assets quickly and accurately with an instant bill of materials for easy reordering, as well as to manage upcoming maintenance and replacement needs proactively via built-in scheduling.

Customers can also grow their revenues through secure aftermarket sales, thanks to a unique six-digit code that directs buyers back to the original hose assembler. Cloud-based inspection information, testing certifications, engineering drawings, and more aid in record-keeping and minimize cumbersome and costly paper-based processes.

Benefits:

Complete asset lifecycle management

Label, track, and manage products while meeting OEM compliance requirements.

Reduces downtime

Replace assets quickly and accurately with an instant bill of materials for easy reordering.

Enables on-the-go asset management

Accessible on smartphones, tablets, and desktop applications - anywhere, anytime.

Set schedules and run reports

Proactively manage upcoming maintenance and replacement needs via built-in scheduling. Run and export custom reports.

Increase revenue

Secure aftermarket sales with a unique six-digit code that directs customers back to the original hose assembler.

Streamline record keeping

Upload inspection info, testing certifications, engineering drawings, and much more. Minimize paper-based processes.

With UniqID you can label and track products to meet compliance requirements, where as manage and access them on the go. Set schedules for maintenance and replacements as well as attach important documents. Reduce downtime and increase your revenue.



On-site **application engineering**

With on-site support from our experienced engineers at their manufacturing location, customers can reduce the time and cost for new application development and select the most suitable components during prototyping to guarantee an efficient, cost-effective, and competitive solution.



Our on-site application engineering service gives customers the option to have an expert engineer on-hand at their manufacturing location to oversee the development process, either temporarily or permanently. This enables customers to choose the most suitable products early in the development of new applications, helping to ensure the result delivers technically, while also being as cost-effective and competitive as possible.

Through close collaboration, our application engineers enable customers to reduce their engineering time by managing the process of creating prototype designs, selecting products, defining the bill of material, overseeing connectivity and routing, and choosing accessories like clamps and hose protection. This drastically reduces the number of design iterations required, shortening both the time and cost for creating new applications.

Benefits:



Enables easy access to scarce, high-level engineering expertise



Makes application development faster and less expensive



Expert support ensures an efficient, cost-effective, and competitive solution



Ideal routing upfront reduces design iterations and later issues

Our experienced application engineers support customers on-site their manufacturing location to select the best products for the dedicated application during the prototyping phase to guarantee the most effective and cost competitive routing. Having less complexity through close partnership.



Danfoss Power Solutions II GmbH, Fluid Conveyance, Dr. -Reckeweg-Str.1, DE-76532 Baden-Baden, Tel. +49 7221 6820

Any information, including, but not limited to information on selection of product, its application or use, product design, weight, dimensions, capacity or any other technical data in product manuals, catalogues descriptions, advertisements, etc. and whether made available in writing, orally, electronically, online or via download, shall be considered informative, and is only binding if and to the extent, explicit reference is made in a quotation or order confirmation. Danfoss cannot accept any responsibility for possible errors in catalogues, brochures, videos and other material. Danfoss reserves the right to alter its products without notice. This also applies to products ordered but not delivered provided that such alterations can be made without changes to form, fit or function of the product. All trademarks in this material are property of Danfoss A/S or Danfoss group companies. Danfoss and the Danfoss logo are trademarks of Danfoss A/S. All rights reserved.