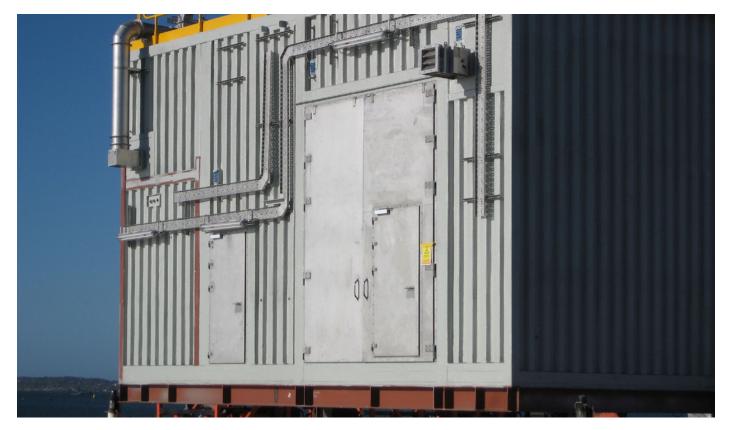


MANUFACTURER OF MARINE DOORS AND WINDOWS SINCE 1943

YOUR DOOR INTO THE FUTURE





THE TOTAL PROGRAM OF MARINE SAFETY DOOR AND SAFETY WINDOW SOLUTIONS GLOBALLY

Baggerød offer complete program of high quality fire doors and windows for offshore installations and ships worldwide

Baggerød offer doors, windows and escape hatches. The program consist of products in all fire-classes for internal and external use. Baggerød is a highly flexible organisation and are well suited for "standard" and "specially made" productions. Quality is key for the products that are built to last, with a minimal amount of maintenance.

Manufacturer of marine doors and windows since 1943

Since the beginning, the company have supplied offshore installations and ships worldwide. The Baggerød company was established in 1943. Throughout the history of the company name have changed. For a long time Baggerød doors was known as "Norac" doors, but in fact they were Baggerød doors all the time!

Experience is the key

Our experienced sales team are available to help you find the right solutions and products for your project.

There are many aspects to consider when choosing doors and windows for an offshore installation. In addition to our basic product line, there are many options and adaptation possibilities to choose from.

We have the tools to help you find the right solutions.

Manufacturing capability

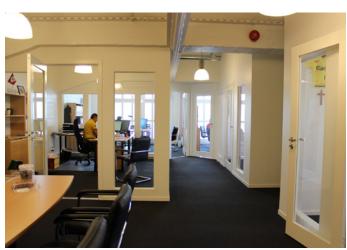
Baggerød have the capacity to produce per year approx 1500 ea. Heavy duty doors in their factory in Horten/Norway and 3500 ea. light/Medium duty doors in our factory in Panevèzys/Lithuania.

Technical capability

Baggerød in Norway: Engineer 7 Persons

Acker Marine Co, Ltd in Korea: Engineer 3 Persons





TECHNICAL INFO

Baggerød have long experience in marine fire-door production. Our door designs are well proven for many years.

Thin steel plate construction

The doors are made of thin steel plates that are point welded together to avoid heat-deformation of the metal.

Design, options and sizes

We categorize our products in door series. Each series have the following data-sheet:

ETO data-sheet: Project configured products (all

options (ETO: Engineering To

Order)).

Typical data-sheet: "Standard" pre-configured

products

Special purpose data-sheet: Predefined doors

(can also be project specific).

Standardization

Without have a structured plan, doors to a large facility can be a very complex project. We therefore urge you to standardize in sizes and configuration if possible. This will save time and money.

Door closer or automatic operation

Manual operated doors are normally delivered with a door closer. Baggerød also deliver electric or pneumatic systems for automatic handling of the doors.

Sound reduction

Baggerød have many doors that are tested for sound reduction (see product data-sheets for details). Best sound reduction is achieved with gaskets on the doors all around.

Gas tightness

Most of Baggerøds fire-doors can be gas tight when delivered with gaskets all around. Gas-tightness also require an accurate installation of the door.

Weather resistance

Baggerøds external fire-doors can withstand normal marine weather conditions. This require gaskets, threshold and and accurate installation of the door. Baggerød also deliver semiwatertight door. Please see door program.

Blast resistance

Baggerød have doors that are blast resistant from the external side. We can also on a project basis calculate and produce doors for specific blast ratings.

Surface protection

Baggerød doors are can be delivered the following surface protections/finishes:

- Powder painted in Standard RAL colours
- Wet painted
- Wet painted (NORSOK requirements)
- Acid washed stainless steel

Baggerød have procedures suitable for most projects. We also can adapt special procedures on a project basis.

Industrial finish

The doors have an "industrial" finish. Welding point-dents may be slightly visual. A more exclusive finish may be discussed.

Bolted or welded bulkhead fastening

Baggerød recommend bolted installations. Bolting ensure flexibility during installation. Welded doors can be supplied.

Preservation, packing and handling

Baggerød standard preservation, packing and handling procedure ensure safe packing and handling for normal transportation and storage. If the goods need extra preservation we recommend a more that extensive procedure is used on a project basis.

Marking of product

To comply with NORSOK C-002, edition 4, chapter 7.10 and 7.16 and DNV's requirements for marking of products, the door leaf is provided with a durable sticker/tag sign to fulfil these requirements. Metal tag plates can be supplied.

Testina

Normally all functions are tested during assembly of the doors. If you want a FAT test or other testing of the doors, that can be calculated and arranged.

Product documentation

For basic door deliveries, we supply a standard package of documents:

- Document list (SDL)
- Product data sheet
- GA Drawing (general)
- Electric wiring or pneumatic drawing (if applicable)
- Installation Maintenance and Operation manual (IOM)
- Certificates and Declaration of Compliance.

On a project basis we supply more complex documentation packages.

QA

Baggerød AS are ISO9001: 2015 approved and all products are produced and tested according to the QA system and the product series certificates and approvals.

Certification

Baggerød as have certified products according to IMO-SOLAS regulations and major classification societies such as: DNV, Lloyds Register of Shipping, Germanisher Lloyds, Bureau Veritas, US Coast Guard, ABS, Russian Maritime Register of Shipping European Community has established an EU Directive on Marine Equipment that complies with and have issued a DNV MED certificate ("wheel" mark).

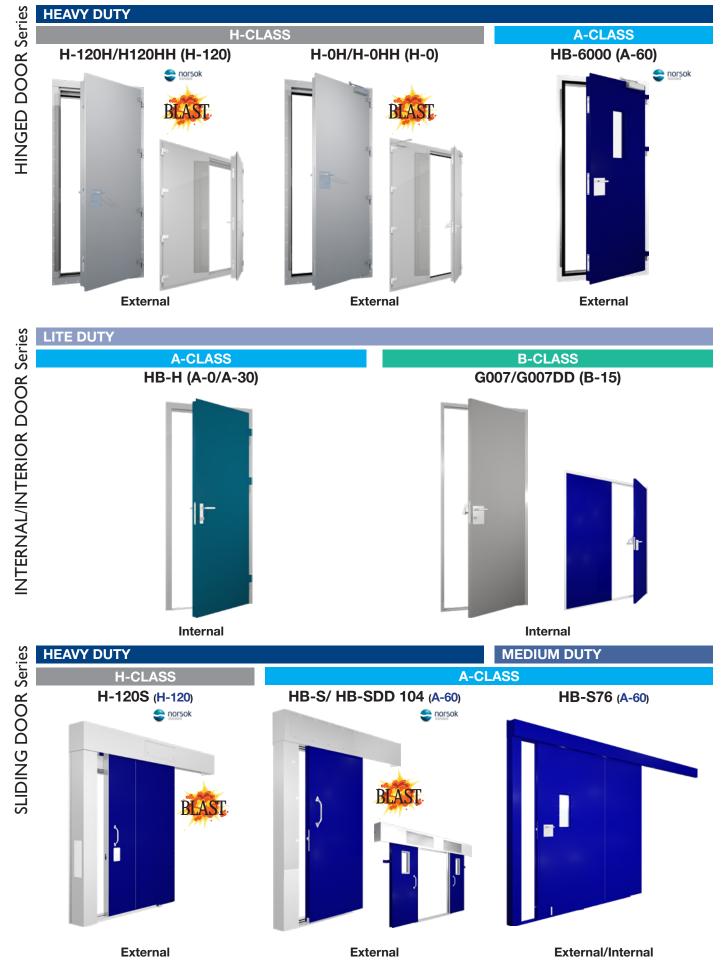
Life-cycle services

Our life-cycle service department is an important part of our company. The life-cycle department will assist after the product has left the warehouse. For more information, see our LifeCycle services brochure or please contact the LiveCycle services department: service@baggerod.no



DOOR SERIES OVERVIEW

Baggerød door series are very flexible, and there are endless possibilities. This is an overview of the series organized by fire class and duty. Each door series have a ETO (Engineering To Order) data-sheet that shown the configuration options. In the next brochure section, you will find an overview of typical door designs for a more specified product.



HB-6000W (A-60)

HB-5000/ HB-5000DD (A-60)

HB-H/HB-HH, (A-60)

Porsok

Porsok

HEAVY DUTY

External Weather-tight

MEDIUM DUTY

A-CLASS

External

HB-5000-EH (A-60)

HB-5000-EH-G GLAZED HATCH (A-60)

External (single) /Internal





External External

LITE DUTY

B-CLASS

HB-SB (B-15)



EXTRA LARGE DOORS (A-60)

Baggerød can deliver large doors (hinged and sliding) in sizes up to 3000mm x 4500mm.

- The doors can be supplied with access door integrated.
- The large doors can be equipped with pneumatic operation on the main door and on the access door.
- Internal/External



TYPICAL AND SPECIAL PURPOSE DOORS

To speed up the process of defining the configuration of normal doors, Baggerød have made data-sheets and drawings for the most used door specifications. If you find a typical product you can use, there are more or less only size and colour that remains to be decided.



HB-H / HB-HH, (A-60)

- Typical hinged offshore doors
- Typical hinged ship doors
- Container door



HB-S 76 (A-60)

- Typical sliding offshore doors
- Typical sliding ship doors
- Typical ferry sliding door



HB-5000 / HB-5000 DD (A-60)

- · Typical hinged external doors
- TP Entrance door for windfarm foundations



WINDOWS, GLAZED PARTITIONS

The windows offers optimum safety and comfort with an on site tested sound reduction of 62dB. The window unit consist of the main frame, made in 4mm or 6mm coated mild steel or stainless steel (welded or bolted). A sealed condensation free glass panel. A fixing frame, and an adjustable internal frame.

WINDOW A-0/A-30/A-60

Fire class: A-0 to A-60
Sound reduction: 62 dB
Gas tightness: Yes



GLAZED PARTITION A-60 / B-30

Using the window technology, we have developed an effective frame system for combining several windows into a large partition.

Fire class: A-60 / B-30 Sound reduction: R_w=41dB Gas tightness: Yes



WINDOW BOX

Being able to see around corners could be a smart ability. With an angled window box, you can bring light into a room from different angles.



WINDOW B-30

WINDOW H-60

Sound reduction: Gas tightness:

Fire class: B-30 Sound reduction: 40 dB Gas tightness: Yes

ELECTRIC DRIVE SYSTEM FOR DOORS

Baggerød use the markets best suppliers of electric drive systems for hinged doors and Lite sliding doors. The systems can be equipped with a lot of operational options.





PNEUMATIC SYSTEM

Baggerød can deliver hinged pneumatic doors and sliding pneumatic doors. This is a powerful and durable system.

The pneumatic system can be made in a complete cassette as shown or as parts for a custom installation.

The cassette solution are easy to install and are space efficient.

There are pneumatic systems for both sliding and hinged doors.



THE FIRST EX CERTIFIED ELECTRIC DRIVE SYSTEM FOR SLIDING DOORS

HBI200ELEx - Electric drive system for sliding doors

- Strong and very reliable
- · High operational stability
- Certified A-60 fire security
- Time efficient installation
- Cost effective maintenance compared to pneumatic system
- Ethernet network for system communication and interface to other systems
- Advanced system monitoring with remote operation available as option for bridge display, control room or external systems

THE BEST ELECTRIC DRIVE-SYSTEM FOR SLIDING DOORS HBI100EL

HBI100EL have the same functionality as HBI200ELEx but are since it is non Ex more flexible. We have today a lot of experience with this system, and have delivered most of the configurations needed in internal offshore and internal/external ship environments.



Demo door can be seen at our office in Horten, Norway

REFERENCES

Baggerøds Main business areas are: Offshore, Offshore-wind farm, Commercial vessels and Cruise vessels. Here is a small portion of our reference-list:















Baggerød AS

Office/factory Horten Industripark, Nedre vei 8,

address: Building 30C, 3183 Horten, Norway

Post address: Post box 155, NO-

3192 - Horten, Norway

Telephone: +47 33 03 56 80

E-mail: sales@baggerod.no

Website: www.baggerod.no

Enterprise no: NO 983 493 653

