

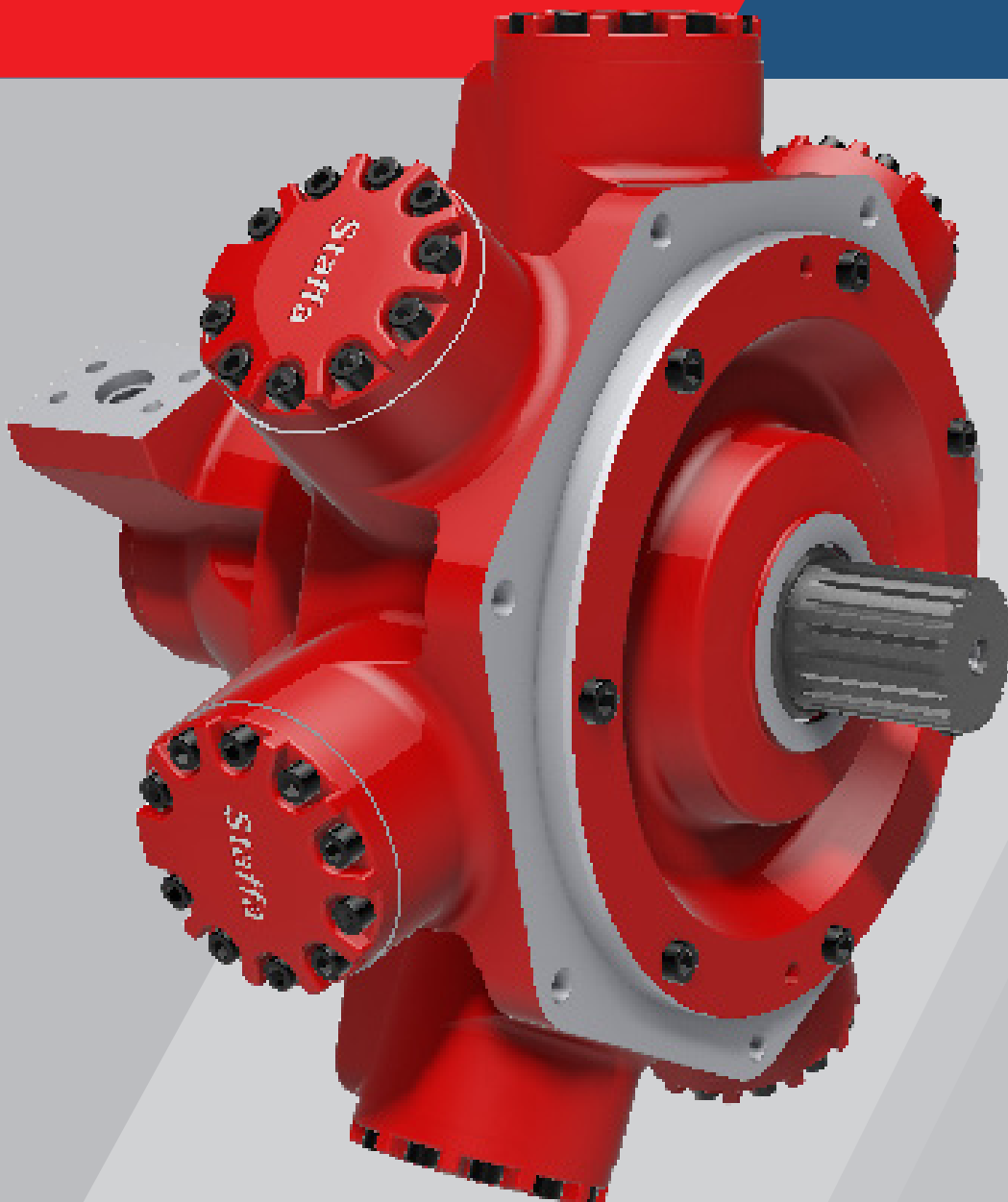
# Radial Piston Staffa Motor Range

For use in potentially  
explosive atmospheres

Non-electrical equipment  
for explosive atmospheres

BS EN ISO 80079-36:2016

BS EN ISO 80079-37:2016



# Applications/Product Usage

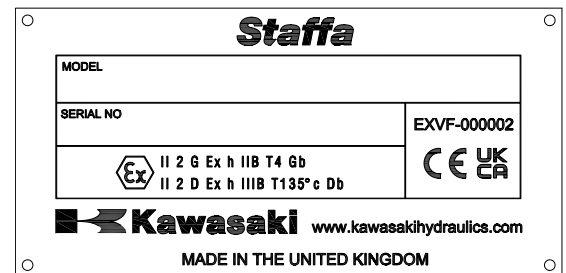
## The Staffa motor range for use in Potentially Explosive Atmospheres

The ATEX directive 2014/34/EU specifies the necessary safety requirements for products intended to be used in potentially explosive atmospheres. The Staffa motor ATEX range meet the requirements as stated in the ATEX directive 2014/34/EU, BS EN ISO 80079-36:2016 and BS EN ISO 80079-37:2016 to operate within the areas and zones as indicated by the marking below. This is applicable to the existing EU scheme and the new UKEX scheme.

 II 2 G Ex h IIB T4 Gb

 II 2 D Ex h IIB T135°C Db

Please refer to document BS EN ISO 80079-36:2016, BS EN ISO 80079-37:2016 and ATEX directive 2014/34/EU for details.



### The following must be taken into consideration before use.

1. The operating condition of the products shown in this catalog varies depending upon each application. Therefore, the product suitability must be judged by the designer of the hydraulic system and/or the person who finalizes the technical specifications of the machine after analysis and testing. The product specification shall be determined based on the latest catalogue and technical documents. The system must be designed taking into account the possibility of machine failure to ensure that all safety, warning, and application requirements are met.
2. For the proper use of the products, descriptions given in the SAFETY PRECAUTIONS must be observed.
3. The technical information in this catalog represents typical characteristics and performance of the products as of the published date.
4. If the intended use of the products is included in the following, please consult with Kawasaki in advance.
  - (1) Use of the product in operating conditions or environments other than those described in the technical documents.
  - (2) Use of the product in the nuclear sector, aviation sector, medical sector, and/or food sector.
  - (3) Use of the product in applications which may cause substantial harm to others and their property, and especially in applications where ensuring safety is a requirement.
5. It is the system designers responsibility to ensure that the system is sufficiently earthed.
6. The system must be fitted with an ATEX approved temperature sensor and cut out switch such that in catastrophic failure power unit is shut down (Fitted by customer).
7. A regular maintenance and overhaul schedule should be followed based on bearing life calculation.
8. The information described in this catalogue is subject to change without notice. For the latest information, please contact Kawasaki or visit us at [www.kpm-uk.co.uk](http://www.kpm-uk.co.uk)
9. KPMUK shall not be held responsible for failing to correctly install or maintain the products supplied. It is the user's responsibility to ensure that the products contained within this datasheet are installed correctly and only used within the environments stated on nameplate coding.

# Staffa Motor Range

For use in potentially  
explosive atmospheres



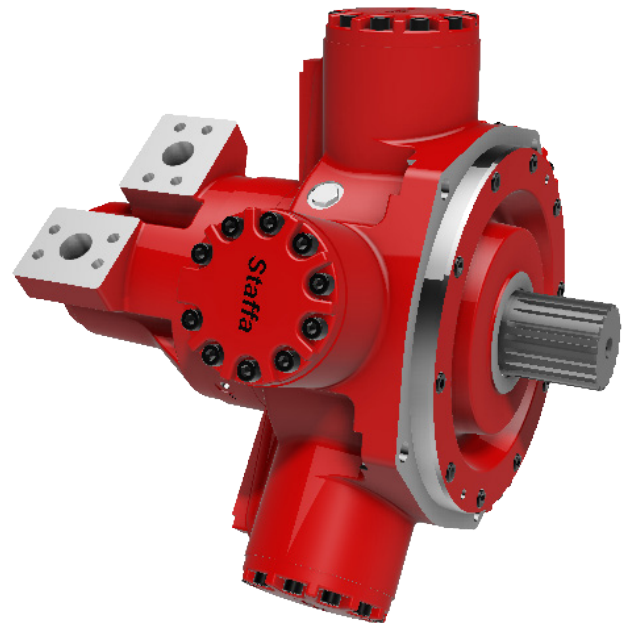
## Radial Piston Hydraulic Motors

### ■ General Descriptions

The Kawasaki Staffa ATEX range of radial piston hydraulic motors consists of various frame sizes offering a large range of capacity and power options.

The rugged, well proven design incorporates high efficiency combined with good breakout torque and smooth running capability. Various features and options are available including, on request, mountings to match competitors' interfaces.

To view the specifications and full range of options please refer to datasheets on KPMUK website. **Please note - some paint options and all electrical options will be unavailable.**  
[www.kawasakihydraulics.com](http://www.kawasakihydraulics.com)



### ■ Features

- Rugged, reliable, proven design
- Unique hydrostatic balancing provides minimum wear and extended life
- High volumetric and mechanical efficiency
- Large variety of shaft and porting options
- Wide range of mounting interfaces available
- Alternative displacements also available

To order a motor from the Staffa ATEX range please contact KPMUK with your requirements and a new model code and part number will be issued accordingly.

[www.kawasakihydraulics.com](http://www.kawasakihydraulics.com)

# Technical Information

## Bearing Life Notes

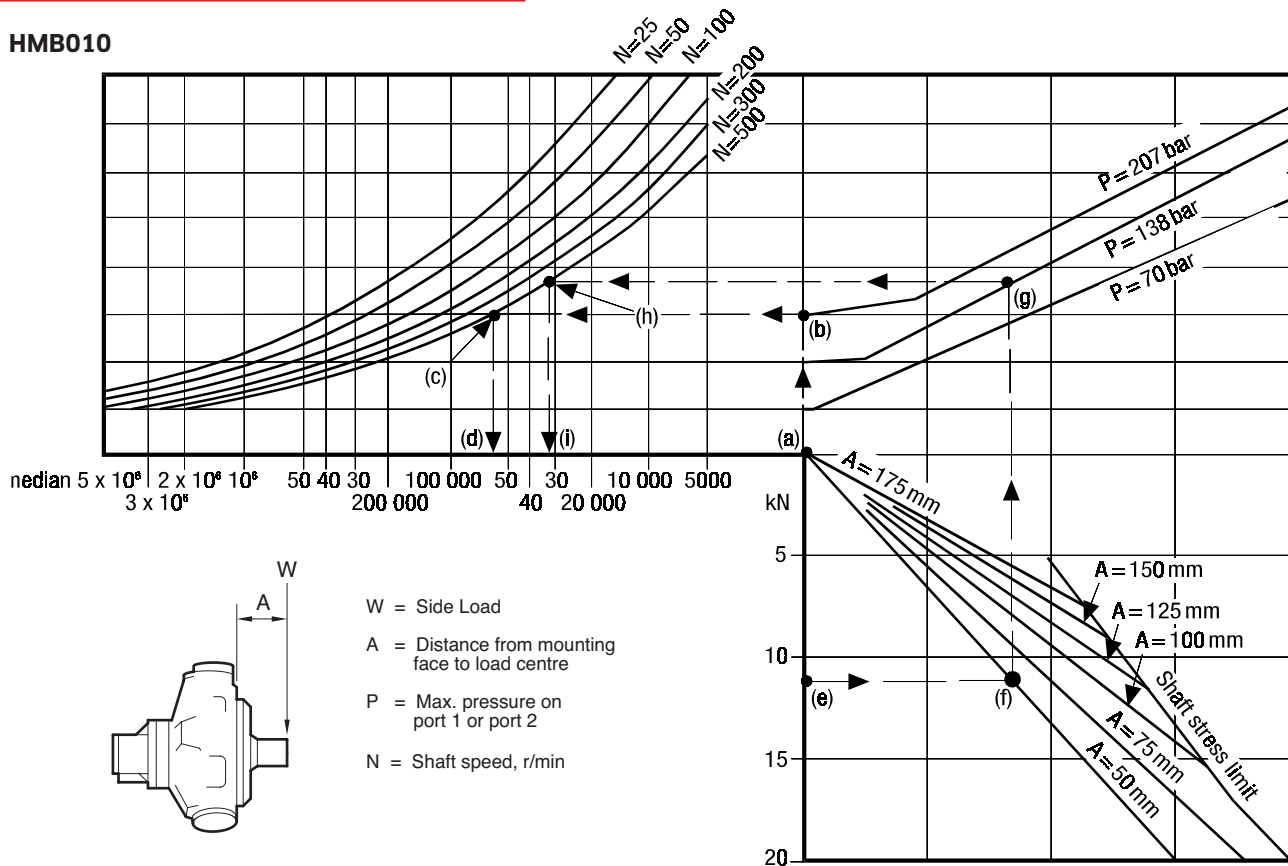
A regular maintenance and overhaul schedule should be followed based on bearing life calculation. Consideration should be given to the required motor bearing life in terms of bearing service life. The factors that will determine bearing life include:

- 1) Duty cycle - time spent on and off load
- 2) Speed
- 3) Differential pressure
- 4) Fluid viscosity
- 5) External radial shaft load
- 6) External axial shaft load

For a detailed bearing life calculation please contact KPMUK.

## Bearing Life Graphs

HMB010



**Example 1** (follow chain dotted line):

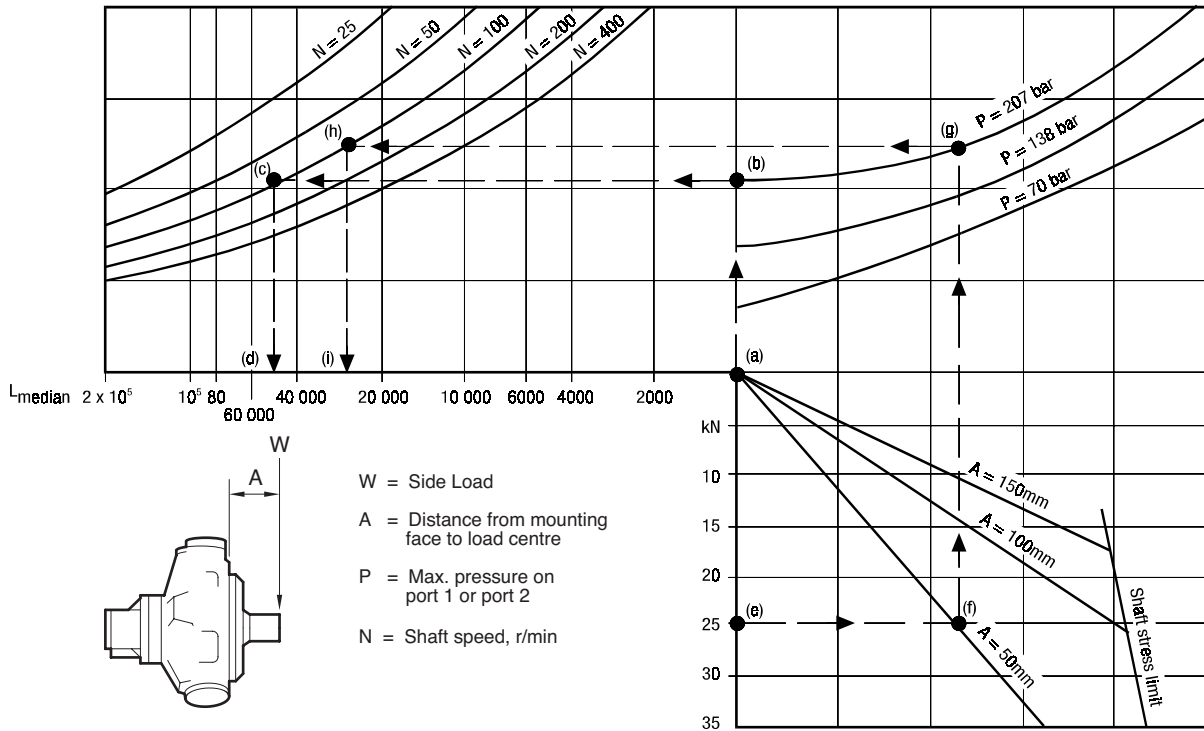
- Side load (W) (a) 0
- System pressure (P) (b) 207 bar
- Speed (N) (c) 500 r/min.
- Median bearing life (d) 55,000 hrs.
- L10 bearing rating = median x 0.2 11,000 hrs.

**Example 2** (follow chain dotted line):

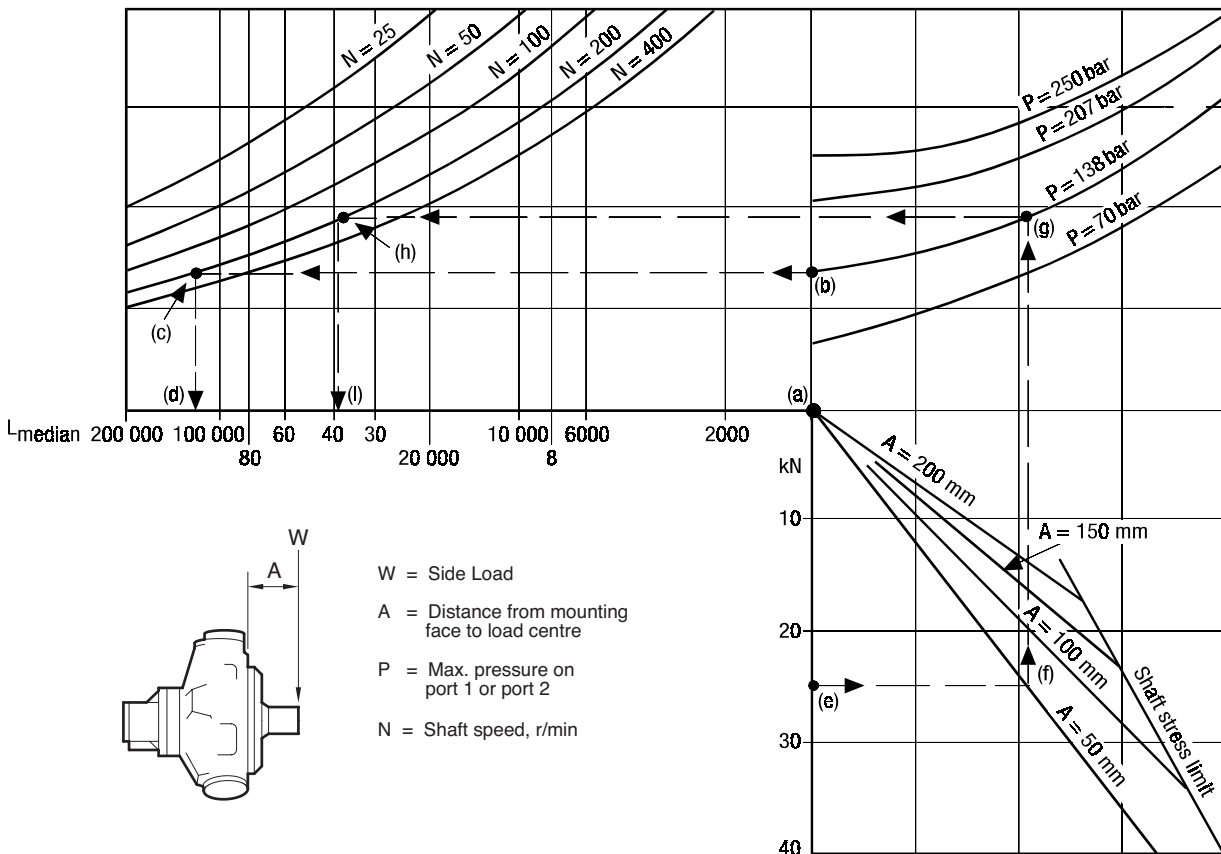
- Side load (W) (e) 11 kN
- Load offset (A) from motor mounting face (f) 50 mm
- System pressure (P) (g) 138 bar
- Speed (N) (h) 500 r/min.
- Median bearing life (i) 31,000 hrs.
- L10 bearing rating = median x 0.2 6,200 hrs

# Bearing Life Graphs

## HM\*030

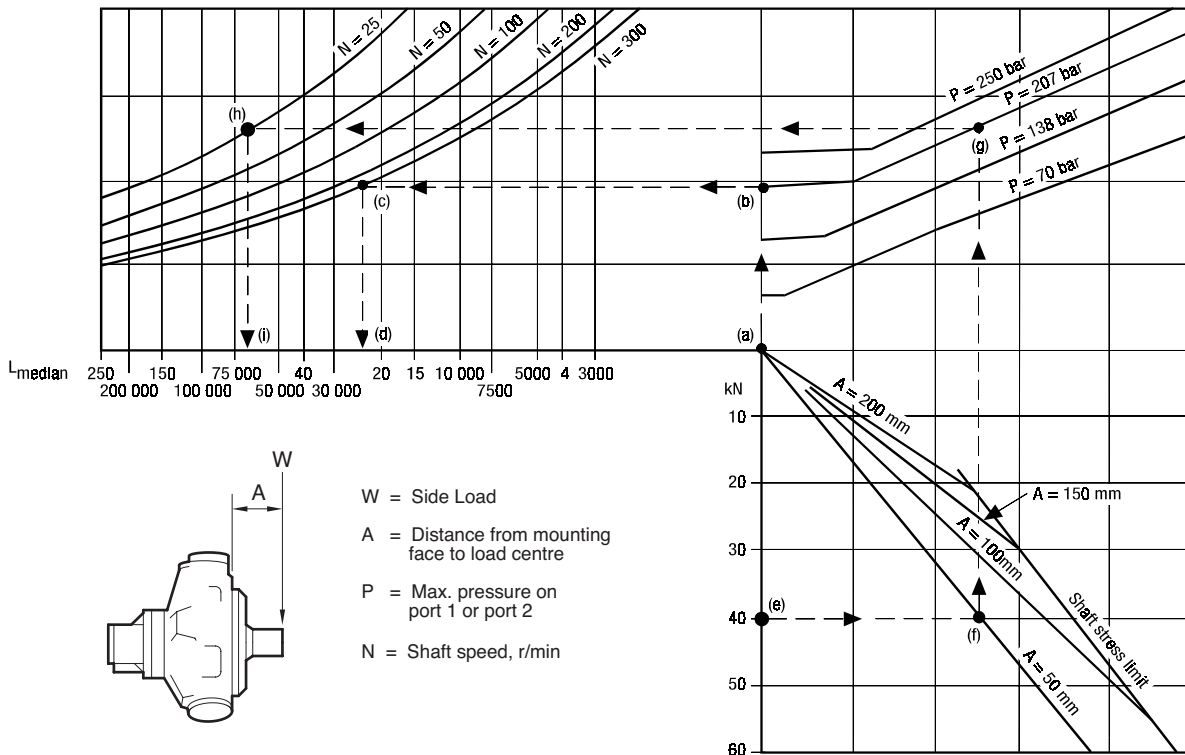


## HM\*045

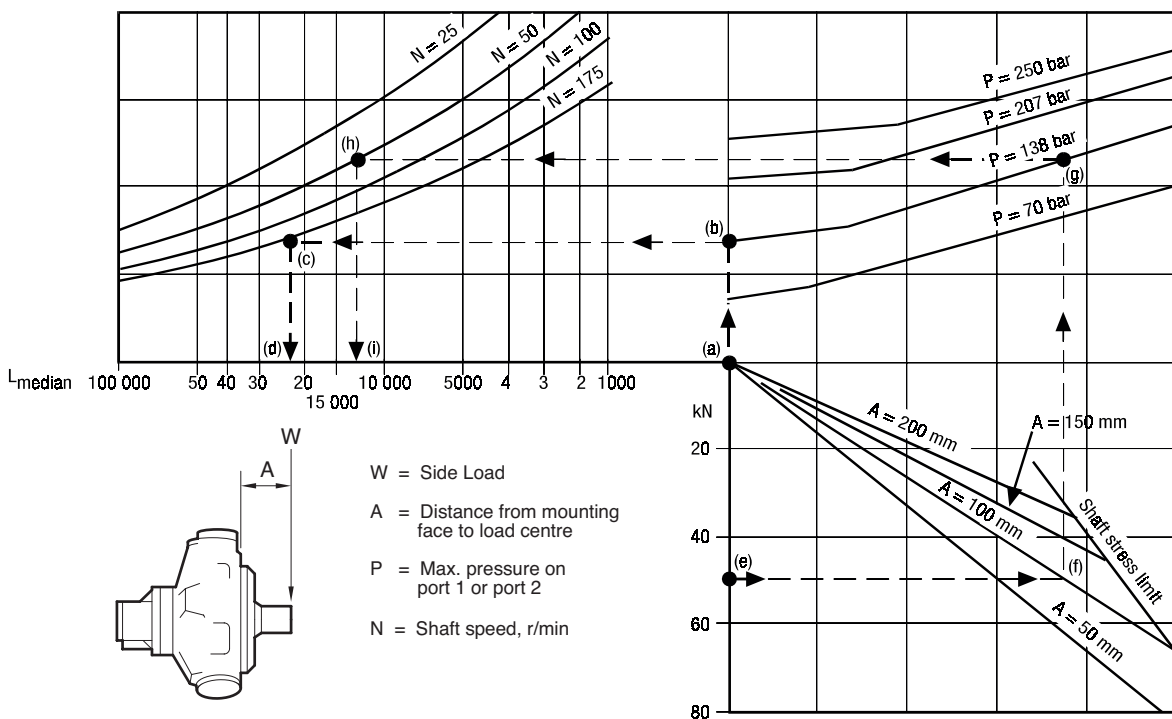


# Bearing Life Graphs

H\*\*060, H\*\*080, H\*\*100

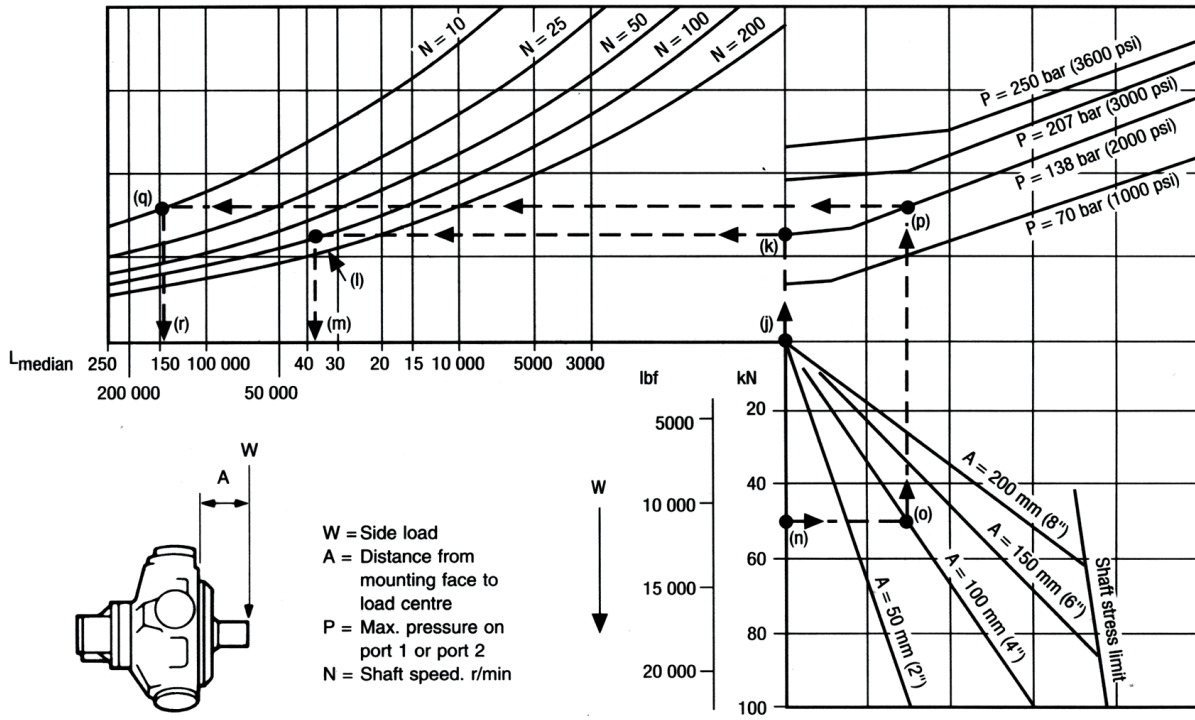


H\*\*125, H\*\*150, H\*\*200

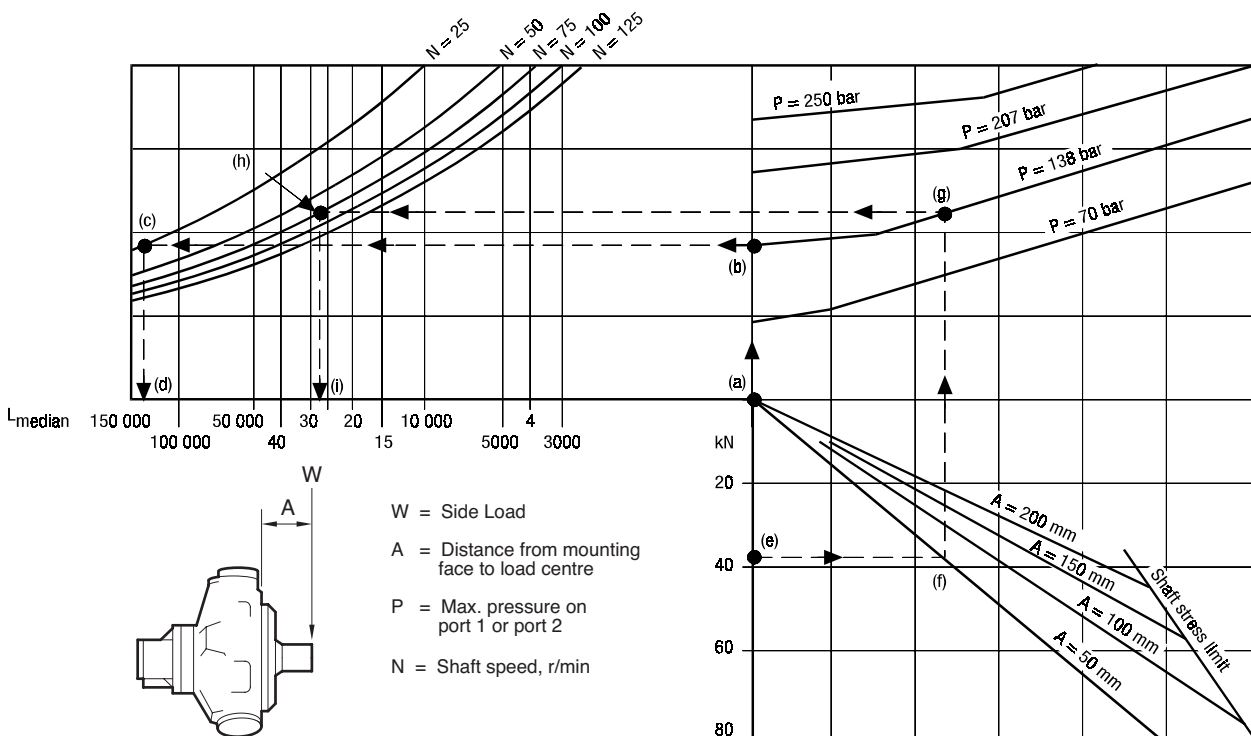


# Bearing Life Graphs

HMHD\*125, HMHDB150, HMHD\*200

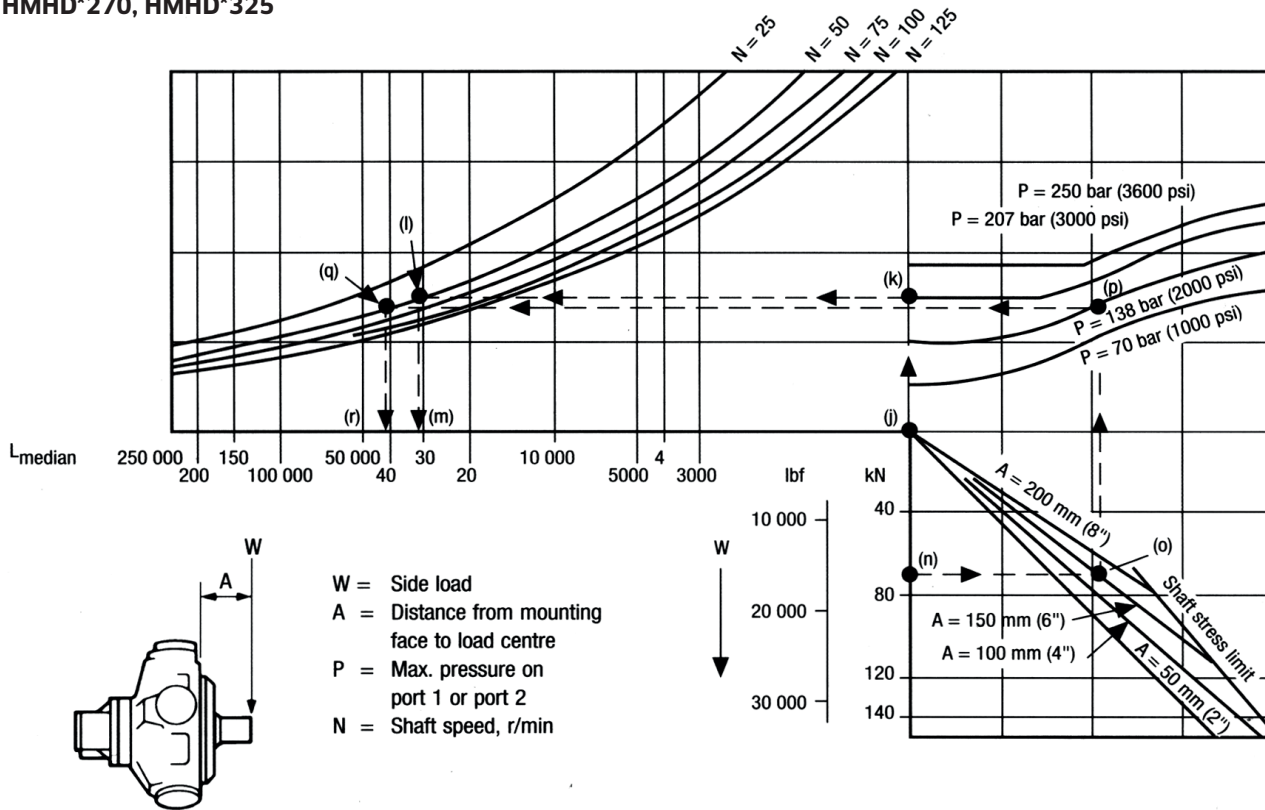


H\*\*270, H\*\*325

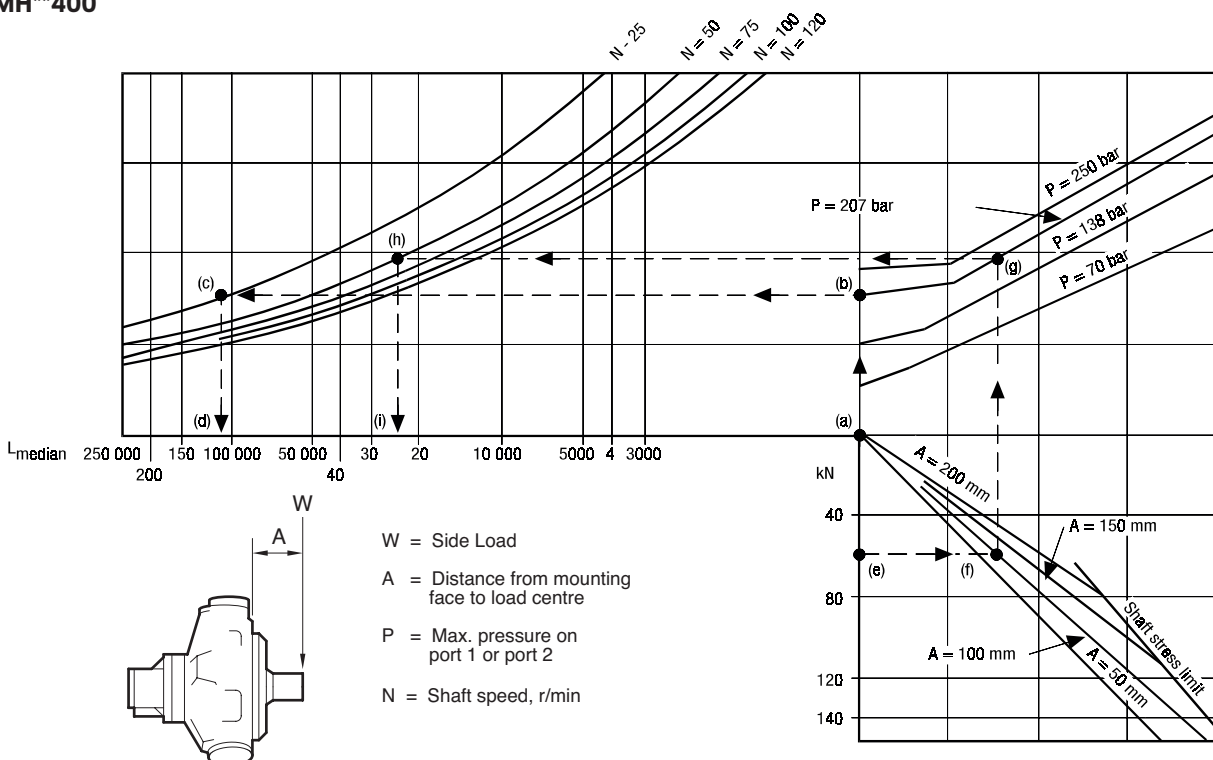


# Bearing Life Graphs

HMHD\*270, HMHD\*325



HMH\*\*400








# Safety Precautions


Before using the product, you **MUST** read this catalog and **MUST** fully understand how to use the product. To use the product safely, you **MUST** carefully read all Warnings and Cautions in this catalog.

## 1. Cautions related to operation


 **CAUTION** - Use the personal protective equipment to prevent injury when the product is in operation.


 **CAUTION** - Some components are heavy. Handle the product carefully not to hurt your hands and lower back.


 **CAUTION** - Do not step on, hit or drop, or apply strong force to the product, as these actions may cause operation failure, product damage, or oil leakage.


 **CAUTION** - Wipe off any oil on the product or the floor completely, as oil can create slippery conditions that may cause drop of the product and personal injury.


## 2. Warnings and cautions related to installation and removal of the product


 **CAUTION** - Installation, removal, piping, and wiring must be done by a qualified technician.


 **WARNING** - Make sure that the hydraulic power unit is turned off and that the electric motor or engine has completely stopped before starting installation or removal. You must also check that the system pressure has dropped to zero.

 **WARNING** - Make sure that the power source is turned off before installing electric components to reduce the risk of electric shock.


 **CAUTION** - Clean the threads and the mounting surface to prevent damage or oil leakage. Inadequate cleaning may cause insufficient torque and broken seals.

 **CAUTION** - Use the designated bolts and fasten them with prescribed torque when installing the product. Use of undesignated bolts, and excessive or insufficient tightening torque may induce operation failure, damage, or oil leakage.


 **CAUTION** - Ensure system is earthed.


 **CAUTION** - System must be fitted with an Atex approved temperature sensor and cut out switch such that in catastrophic failure power unit is shut down. (Fitted by customer).


## 3. Warnings and cautions for operation

 **DANGER** - Always equip the product with explosion or ignition protection if it is used in potentially explosive or combustible atmospheres.


 **WARNING** - Shield rotary parts, such as the motor and pump shaft, to avoid injury.

 **WARNING** - Stop operation immediately, and take proper measures when the abnormality such as unusual noise, oil leakage, and smoke is found. Continuing operation under such condition may bring about damage, a fire hazard, or injury.


 **CAUTION** - Make sure that all pipes, hoses, and connecting points with pipes or hoses, are correctly connected and tightened before starting operation.


 **CAUTION** - Use the product under the operating conditions and limitations described in the catalog, drawings, and specification sheets.

 **CAUTION** - Do not touch the product in operation. to reduce the risk of skin burn.


 **CAUTION** - Use the proper hydraulic oil and maintain the filtration at the recommended level to prevent premature wear and damage.

## 4. Cautions related to maintenance


 **CAUTION** - Never modify the product without approval from Kawasaki.

 **CAUTION** - Disassembly of the product may void the warranty.

 **CAUTION** - Keep the product clean and dry when storing or transporting.

 **CAUTION** - The seals may need to be replaced if the product has been stored for an extended period of time.

 **WARNING** - Making adjustments of this product will result in the warranty being null and void.

 **WARNING** - A regular maintenance and overhaul schedule should be followed based on bearing life calculation.



1 **Technical Documentation Receipt and Storage**

2 **ATEX & UKCA EPS REGULATIONS**

- 3 File Number: **EXVF-000002**
- 4 Equipment: **Staffa Product Range**
- 5 Manufacturer: **Kawasaki Precision Machinery (U.K) Ltd**
- 6 Address: **Ernesettle Lane, , Ernesettle, Plymouth, Devon, PL5 2SA**

7 The Referenced Dossier has been received and is stored under the control of ExVeritas ApS (Denmark), **ATEX Notified Body Number 2804** and ExVeritas Limited, **UKCA Ex Approved Body Number 2585** who are both part of the ExVeritas Group.

8 ExVeritas takes no responsibility for the validity of any information or data supplied within the file by the manufacturer on which parts of the assessment may be based upon. ExVeritas undertakes that all documents lodged in its care will not be opened or reviewed.

9 Any modification to the product affecting the product as described in the Referenced Dossier must be include in the Referenced Dossier via the ExVeritas File Change process.

10 The file will be held for 10 years after the expiry date, but no further products can be placed on the market after the expire date.

11 File Receipt Date: **11/05/2021**

12 Manufacture Period: 5 Years

13 File Lodge Expire Date: **11/05/2026**

On behalf of ExVeritas

A handwritten signature in black ink, appearing to read 'S L Clarke', written over a light blue horizontal line.

S L Clarke CEng MSc. FIET  
Managing Director

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# Notes

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**The specified data is for product description purposes only  
and may not be deemed to be guaranteed unless expressly  
confirmed in the contract.**

Data sheet: M-10.18