



Marine & Offshore  
Division

Certificate number: 16128/C0 BV

File number: ACM 101/96/02

Product code: 14071

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**DESMI Pumping Technology A/S**

Nørresundby - DENMARK

*for the type of product*

**GEAR PUMPS**

ROTAN Gear Pumps - Types GP, HD, PD, CD, ED, CC

### Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units

*This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 07 Sep 2020**

**For BUREAU VERITAS,**

At BV FREDERICIA, on 07 Sep 2015,

Jesper Jensen



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site [www.veristar.com](http://www.veristar.com). Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 October 2014

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION

DESMI ROTAN gear pumps

- Type GP, general purpose monoblock pump for clean, non-abrasive liquids
- Type HD, heavy duty pump for a wide range of viscous, non-corrosive liquids
- Type PD, petrochemical duty pump for refinery and petrochemical applications
- Type CD, chemical duty pump for corrosive liquids
- Type ED, environmental duty pump with magnetic coupling for protection against leakage
- Type CC, close-coupled pump for oil products

#### 1.1 Design

Pump Type	Capacity Range (m <sup>3</sup> /h)	Operating Pressure (bar)	Speed (rpm)	Maximum Liquid Temperature (°C)
GP	Up to 50	Max. 16	Up to 1750	150
HD	Up to 250	Max. 16	Up to 1750	250
PD	Up to 250	Max. 16	Up to 1750	250
CD	Up to 170	Max. 16	Up to 1750	250
ED	Up to 50	Max. 16	Up to 1750	130/250 *
CC	Up to 170	Max. 16	Up to 1750	80

\* depending on magnetic material

Elastomer type	Temperature range (°C)
FPM	-25 / +170
FEP	-60 / +205
EPDM	-65 / +120
FFKM	-50 / +316
NBR	-30 / +70
PTFE	-15 / +170

- The pump's inlet/outlet can be supplied with internal threads or flanges.
- The ROTAN gear pumps are supplied both with and without a safety valve.

#### 1.2 Pump sizes depending on type

- The ROTAN gear pumps are supplied in various pump sizes.
- The pump size is defined on the basis of the pump's inlet/outlet.

Pump sizes	Nominal Diameter (mm)	Internal Diameter (inches)	Pump sizes	Nominal Diameter (mm)	Internal Diameter (inches)
26	25	1"	124	100	4"
33	32	1 1/4"	126	125	5"
41	40	1 1/2"	151	150	6"
51	50	2"	152	150	6"
66	65	2 1/2"	201	200	8"
81	80	3"	202	200	8"
101	100	4"			

#### 1.3 Material combination depending on pump series:

Pump casing/covers	Cast iron GG25/ stainless steel G-X6 CrNiMo 18 10/ cast steel GS 52.3
Rotor/ idler	Cast iron GG25/ stainless steel X8 CrNiMo 27 5
Shaft	St. 60.2/ stainless steel X8 CrNiMo 27 5
Idler bearing	Cast iron/ bronze/ carbon/ Al. oxide/ Tungsten carbide
Main bearing	Cast iron/ bronze/ carbon/ Al. oxide/ Tungsten carbide
Shaft seal	Teflon-impregnated, non-asbestos packing/ O-ring type DIN 24960-KU/ magnet material

**2. DOCUMENTS AND DRAWINGS**

- Drawings:

- N° K6623 Rev.b GP51/66EFM	- N° K6625 Rev.a HD51/66EM	- N° K6602 Rev.a HD51/66E
- N° K6617 Rev.a HD51/66EDK	- N° KX6683 Rev.a HD66ECHD	- N° KY6695 Rev.0 PD51-66EM
- N° K6696 Rev.a CD51-66EM	- N° KX6689 Rev.a CD51/66-EFMMW	- N° KY6644 Rev.b ED66EFDK
- N° KY4123 Rev.0 CC41EFM	- N° DD1307 Dimensional Sketch HD 124EDK	- N° DD1665 Rev.a
- N° DD4288 Rev.0		
- User Manual T1456UK		

**3. TEST REPORTS**

The performance curves of pumps are shown on the manufacturer's technical documentation.

**4. APPLICATION / LIMITATION**

4.1 Operating media: Fresh and sea water, oils

4.2 May be used for the following services: Ballast and bilge, fire fighting, cooling, oils and other general service application on case by case basis.

4.3 The pumps used as bilge pumps are to be fitted with efficient priming devices.

4.4 The pumps body and internal parts should be of a suitable type for use with cargoes intended to be carried.

4.5 The approval does not include the prime mover of the pump.

4.6 The pumps are to be installed according to manufacturer's instructions and Society's Rule requirements.

**5. PRODUCTION SURVEY REQUIREMENTS**

5.1 The products are to be supplied by **DESMI Pumping Technology A/S** in compliance with the type and the requirements described in this certificate. This type of product is within the category IBV of Bureau Veritas Rule Note NR320.

5.2 The manufacturer has declared to Bureau Veritas that the pumps detailed in this certificate are manufactured at the following production site:

- DESMI Pumping Technology A/S, P. O. Box 226, Tagholm 1, 9400 Nørresundby, Denmark

- DESMI Pumping Technology (Suzhou) Co, Ltd, N° 740 Fengting avenue, Weiting Sub District, 215122 SIP, Suzhou, China

5.3 Each ROTAN gear pump is hydrostatically and performance tested and is delivered with a signed test of certificate in accordance with DESMI's quality management system.

**6. MARKING OF PRODUCT**

Each pump shall to be permanently marked with at least:

- Manufacturer's name or trademark
- Serial number
- Society's brand as relevant

**7. OTHERS**

This certificate is given on the understanding that the manufacturer will accept full responsibility for informing shipbuilders or their sub-contractors of the proper methods of fitting and general maintenance of the products and of the conditions of this approval.

*This certificate supersedes the Type Approval Certificate N° 16128/B2 BV issued on 25/03/2012 by the Society.*

\*\*\* END OF CERTIFICATE \*\*\*