



Certificate No:
TAM000019R

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Elastic Couplings

with type designation(s)

PWE-18, PWE-45, PWE-100, PWE-180, PWE-310, PWE-480, PWE-680, PWE-1000, PWE-1200, PWE-2000

Issued to

**ALTRA INDUSTRIAL MOTION DO BRASIL EQUIPAMENTOS
INDUSTRIAIS LTDA.**

Cotia, SP, Brazil

is found to comply with

DNV-OS-E201 – Oil and gas processing systems, Edition July 2021

Application :

Flexible disc coupling for centrifugal pump and compressor applications.

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2022-06-27**

This Certificate is valid until **2027-06-26**.

for **DNV**

DNV local station: **Rio de Janeiro**

Approval Engineer: **Pierre-Eric Moulia**

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Inger-Helene Hals
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2021-03

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Product description

Type of coupling: Flexible Disc Coupling consisting of three main parts: two hubs and one flexible centre unit

Application/Limitation

Flexible Disc Couplings designed to meet API 610 and API 671 specifications with exceptions to API 671 as presented in deviations list "LIST OF EXCEPTIONS AND COMMENTS TO API 671 POWERFLEX COUPLINGS TYPE PWE".

Hub types: cylindrical-keyed, tapered-keyed or tapered hydraulic.

Dimensional data according to PWE product catalogue: Flexible Disc Couplings and Bearing Isolators, Lamiflex couplings P-7679-LF-A4 12/16.

With maximum spacer length of 460 mm as per API 671

Couplings with model designation according to the table below are covered by this Type Approval.

Model/ Coupling Size	Rating (HP/1000 RPM)	Maximum Rotation (Balanced) RPM	Maximum Axial Misalignment (mm)	Maximum Angular Misalignment (Deg)
PWE-18	18	25000	1.00	0.5
PWE-45	45	25000	1.25	0.5
PWE-100	100	20000	1.50	0.5
PWE-180	180	18000	2.00	0.5
PWE-310	310	14000	2.50	0.5
PWE-480	480	10000	2.75	0.5
PWE-680	680	9000	3.25	0.5
PWE-1000	1000	8000	3.75	0.5
PWE-1200	1200	7000	4.25	0.5
PWE-2000	2000	6000	5.00	0.5

Spacers shims API 671 5th, 8.1.4:

Use of shims are project specific. Shims are only applied in couplings with hub with hydraulic clamping.

Interference fit API 671, 5th 8.6.1.1:

Required interference fit is project specific, specified by purchaser and is subject to approval by the vendor.

Balancing:

Project specific. Couplings balanced according to:

API 610 to ISO 1940 (Gr 1.0, 2.5 or 6.3)

API 671 according to the balancing method (1, 2 or 3)

Required unbalance values to be calculated for each application.

Type Approval documentation



Job Id: **262.1-037111-1**
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Tests carried out

Marking of product

The product is to be marked with the manufacturer's name or trademark and type number identification

Periodical assessment

For retention of this Type Approval, a DNV surveyor shall perform a periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days). The objective of the periodical assessment is to verify that the conditions for the Type Approval have not been altered. (Ref DNV-CP-0338 Type approval scheme).

Validity of this certificate can be checked at <https://approvalfinder.dnv.com/>