

This is to certify:

TYPE APPROVAL CERTIFICATE

Certificate No: **TAM00000RN** Revision No:

with type designation(s) DMTP5100 / DMTP6500 / DMT400H / DMT400HL Issued to D-I Industrial Co., Ltd. Jinju-si, Gyeongsangnam-do, Korea, Republic of is found to comply with DNV rules for classification – Ships				
DMTP5100 / DMTP6500 / DMT400H / DMT400HL Issued to D-I Industrial Co., Ltd. Jinju-si, Gyeongsangnam-do, Korea, Republic of is found to comply with				
Issued to D-I Industrial Co., Ltd. Jinju-si, Gyeongsangnam-do, Korea, Republic of is found to comply with				
D-I Industrial Co., Ltd. Jinju-si, Gyeongsangnam-do, Korea, Republic of is found to comply with				
Jinju-si, Gyeongsangnam-do, Korea, Republic of is found to comply with				
is found to comply with				
DNV rules for classification = Snips				
Application				
Application:				
The approval is valid for propulsion use.				
Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.				
Input torque				
Input speed see page two for data				
Reduction ratio				
Issued at Høvik on 2022-08-03				
for DNV				
This Certificate is valid until 2027-06-30.				
DNV local station: Gimhae Station				
DNV local station: Gimhae Station Approval Engineer: Dag Harald Williksen Oddvar Deinboll Head of Section				

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 www.dnv.com Page 1 of 3

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.



Job ld: **262.1-005408-4** Certificate No: **TAM00000RN**

Revision No: 1

Product description

Single stage reduction gears for propulsion with built-in hydraulic operated clutch, power take off and reversing gear.

Application/Limitation

The gears are approved for an application factor $K_A = 1.20$.

Gear	Reduction ratio [Z1/Z2]	Input speed [RPM]	Torque [Nm]
DMTP5100	28/97	2300	732
	23/71	2300	1129
	27/67	2300	1526
	32/62	2300	1600
	34/60	2300	1600
	38/56	2300	1600
DMTP6500	20/139	2100	2239
	21/138	2100	2300
	23/136	2100	2300
	24/135	2100	2300
	26/133	2100	2300
DMT400H	24/66	2500	3705
-	26/64	2500	4050
	30/61	2500	4430
	33/57	2500	4585
-	37/53	2500	4585
DMT400HL	23/114	1800	2972
	25/112	1800	3130
	27/110	1800	3290
	30/107	1800	3395
	32/105	1800	3395
	34/103	1800	3395

PTO	Gear ratio [Z1/Z2]	Output Torque [Nm]
DMTP5100	45/45	310
	50/40	310
DMTP6500	32/41	330
	31/37	330
DMT400H	36/36	380
	34/33	380
DMT400HL	36/36	380
	34/33	380

Type Approval documentation

Drawings and documents listed in our covering letter MTPNO373/HATV/262-J-45344 dated 2005-05-26, MTPNO373/HATV/262.1-005408-J-4 dated 2008-09-24 and 262.1-005408-3/J-18 dated 2017-08-28.

Marking of product

Manufacturers name or trademark and type number designation.

Form code: TA 251 Revision: 2021-03 www.dnv.com Page 2 of 3



Job Id: **262.1-005408-4** Certificate No: **TAM00000RN**

Revision No: 1

Periodical assessment

For retention of the Type Approval, a DNV GL surveyor shall perform an assessment after 2 years and after 3.5 years to verify that the conditions of the type approval are complied with. A renewal assessment will be performed at renewal of the certificate.

In cases where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore Periodical Assessment shall be carried out randomly at these companies.

Other conditions

The following items are not covered by the Type Approval:

- Connections to external shafts
- Ice class notations
- Control and monitoring system
- Mounting/installation of gearbox

END OF CERTIFICATE

Form code: TA 251 Revision: 2021-03 www.dnv.com Page 3 of 3