



TÜRK LOYDU

TYPE APPROVAL CERTIFICATE

This is to certify that the
Reduction Gears for Engines

Manufacturer	: D-I INDUSTRIAL Co. Ltd.
Address	: 13, NAMGANG-RO 1367 BEON-GIL, JINSU-SI GYEONGSANGNAM-DO KOREA
Product Type	: Model DMT190H, DMT190HL, DMT200H, DMT200HL, DMT240H, DMT260H, DMT260HL, DMT280H, DMT280HL, DMT300HL, DMT400H, DMT400HL, DMT460HL, DMT560HL, DMT330DL, DMT450DL, DMT600DL, DMT600BL
Reference Rule	: TL Rules, Part E, Chapter 103 - Metallic Materials, Special Materials for Naval Ships, 01.01.2022 TL Rules, Part E, Chapter 104 - Naval Ship Technology, Propulsion Plants, 01.01.2022 TL Rules, Part E, Chapter 105 - Naval Ship Technology, Electrical Installations, 01.01.2022 TL Rules, Part B, Chapter 5, Electric , 01.01.2024 TL Rules, Part A, Chapter 2, Material, 01.07.2024 TL Rules, Part B, Chapter 4, Machinery, 01.07.2024

Subject to the conditions referred to in the following pages, this certificate is valid until 14.02.2031

Surveyor: **Devran YAMAN**

This certificate includes Appendix (including 2 pages) showing TÜRK LOYDU Type Approval Range Table for 18 Reduction Gear Model (DMT190H, DMT190HL, DMT200H, DMT200HL, DMT240H, DMT260H, DMT260HL, DMT280H, DMT280HL, DMT300HL, DMT400H, DMT400HL, DMT460HL, DMT560HL, DMT330DL, DMT450DL, DMT600DL, DMT600BL)

Issued at İSTANBUL on 02.04.2026



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does not require a manual signature

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Emrah SÖĞÜTÇÜ
New Building Division Manager
TÜRK LOYDU

Expire Date of Previous Certificate: 14.02.2026

This certificate is subject to terms and conditions described below:

Any significant change in design or construction may render this Certificate invalid. Certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. This certificate is not valid for products without marking above mentioned. The manufacturer should notify TÜRK LOYDU of any modifications or changes to equipment in order to obtain valid certificate. This certificate shows that tested specimens as representative of the product complies of the TÜRK LOYDU rules, and relevant international instruments that apply to it.

Product	: Reduction Gears for Engines
Type of Product	: Model DMT190H, DMT190HL, DMT200H, DMT200HL, DMT240H, DMT260H, DMT260HL, DMT280H, DMT280HL, DMT300HL, DMT400H, DMT400HL, DMT460HL, DMT560HL, DMT330DL, DMT450DL, DMT600DL, DMT600BL
Approval No / Date	: PAE-EPAS/023526/25-4816/OAK dated 06.01.2026
Performed Tests	: - Quality Management System Audit - Visual Inspection - Controls according to approved drawings - Electrical Controls - Spin tests - Measurement of input and output speed - Functional controls - Review of the material and component certificates - Alarm checks - Check of contact pattern were found satisfactory.
Test Place	: D-I INDUSTRIAL Co. Ltd. -13, NAMGANG-RP 1367 BEON-GIL, JINJU-SI GYEONGSANGNAM-DO KOREA
Last Inspection Date	: 13.03.2026
Application/Limitation	: 1- These gear boxes intended for main propulsion system with diesel engine. 2- These gear boxes may be fitted on ships granted with an automation notation provided that all requirements stated in our rules complied with. 3- This certificate does not cover Ice Class Notations applications. 4- The reduction gears must be equipped with the parts listed in the manufacturer's parts catalog exclusively. 5- The reduction gears must be delivered with the relevant documentation for their maintenance and their operation. 6- The acceptance of the above mentioned products and other units following tests must be carried out for each gear box on board ship according to Türk Loydu rules. * Load and functional tests * Visual Inspection 7- When requirements by the rules the accessories fitted on the gear box must be type approved. Their certificates are to be presented to the Port Authorities when requested. 8- An elastic coupling is to be installed between the engine and the gear box.
Approval Conditions	: The product is to be marked same as below mentioned. - Maker's name trade mark. - Serial number of the units. - Equipment type or model identification. - Rated power and speed.

APPENDIX - I

© Turkish Lloyd_TA Approval Range Table

MODEL	Reduction Ratio	Max. Input Torque (kgf.m)	Max. Input Torque (Nm)	Max.Input (RPM)	RPM	Power (kW)	RPM	Power (kW)	RPM	Power (kW)	RPM	Power (kW)
DMT190H	1,83	180	1765,3	2500	1800	332,7	2000	369,7	2300	425,2	2500	462,1
	2,09	180	1765,3	2500	1800	332,7	2000	369,7	2300	425,2	2500	462,1
	2,51	180	1765,3	2500	1800	332,7	2000	369,7	2300	425,2	2500	462,1
	3,08	180	1765,3	2500	1800	332,7	2000	369,7	2300	425,2	2500	462,1
	3,43	180	1765,3	2500	1800	332,7	2000	369,7	2300	425,2	2500	462,1
DMT190HL	4,04	180	1765,3	2500	1800	332,7	2000	369,7	2300	425,2	2500	462,1
	4,48	180	1765,3	2500	1800	332,7	2000	369,7	2300	425,2	2500	462,1
DMT200H	1,83	200	1961,4	2500	1800	369,7	2000	410,8	2300	472,4	2500	513,5
	2,09	200	1961,4	2500	1800	369,7	2000	410,8	2300	472,4	2500	513,5
	2,51	200	1961,4	2500	1800	369,7	2000	410,8	2300	472,4	2500	513,5
	3,08	200	1961,4	2500	1800	369,7	2000	410,8	2300	472,4	2500	513,5
	3,43	200	1961,4	2500	1800	369,7	2000	410,8	2300	472,4	2500	513,5
DMT200HL	4,04	200	1961,4	2500	1800	369,7	2000	410,8	2300	472,4	2500	513,5
	4,48	200	1961,4	2500	1800	369,7	2000	410,8	2300	472,4	2500	513,5
DMT240H	1,5	218	2137,9	2500	1800	403,0	2000	447,7	2300	514,9	2500	559,7
	1,97	218	2137,9	2500	1800	403,0	2000	447,7	2300	514,9	2500	559,7
	2,44	218	2137,9	2500	1800	403,0	2000	447,7	2300	514,9	2500	559,7
	2,93	218	2137,9	2500	1800	403,0	2000	447,7	2300	514,9	2500	559,7
	3,4	218	2137,9	2500	1800	403,0	2000	447,7	2300	514,9	2500	559,7
DMT260H	2,06	258	2530,2	2500	1800	476,9	2000	529,9	2300	609,4	2500	662,4
	2,5	258	2530,2	2500	1800	476,9	2000	529,9	2300	609,4	2500	662,4
	2,92	258	2530,2	2500	1800	476,9	2000	529,9	2300	609,4	2500	662,4
	3,26	258	2530,2	2500	1800	476,9	2000	529,9	2300	609,4	2500	662,4
DMT260HL	3,53	258	2530,2	2500	1800	476,9	2000	529,9	2300	609,4	2500	662,4
	4,08	258	2530,2	2500	1800	476,9	2000	529,9	2300	609,4	2500	662,4
	4,52	258	2530,2	2500	1800	476,9	2000	529,9	2300	609,4	2500	662,4
DMT280H	2,06	298	2922,5	2500	1800	550,9	2000	612,1	2300	703,9	2500	765,1
	2,50	298	2922,5	2500	1800	550,9	2000	612,1	2300	703,9	2500	765,1
	2,92	298	2922,5	2500	1800	550,9	2000	612,1	2300	703,9	2500	765,1
	3,26	298	2922,5	2500	1800	550,9	2000	612,1	2300	703,9	2500	765,1
DMT280HL	3,53	298	2922,5	2500	1800	550,9	2000	612,1	2300	703,9	2500	765,1
	4,08	298	2922,5	2500	1800	550,9	2000	612,1	2300	703,9	2500	765,1
	4,52	298	2922,5	2500	1800	550,9	2000	612,1	2300	703,9	2500	765,1
DMT300HL	3,56	298	2922,5	2300	1800	550,9	2000	612,1	2300	703,9	N/A	N/A
	4,13	292	2863,6	2300	1800	539,8	2000	599,7	2300	689,7	N/A	N/A
	4,59	286	2804,8	2300	1800	528,7	2000	587,4	2300	675,5	N/A	N/A
DMT400H	1,43	453	4442,6	2300	1800	837,4	2000	930,4	2300	1070,0	N/A	N/A
	1,72	453	4442,6	2300	1800	837,4	2000	930,4	2300	1070,0	N/A	N/A
	2,03	453	4442,6	2300	1800	837,4	2000	930,4	2300	1070,0	N/A	N/A
	2,46	397	3893,4	2300	1800	733,9	2000	815,4	2300	937,7	N/A	N/A
	2,75	323	3167,7	2300	1800	597,1	2000	663,4	2300	762,9	N/A	N/A
DMT400HL	3,02	453	4442,6	2300	1800	837,4	2000	930,4	2300	1070,0	N/A	N/A
	3,28	453	4442,6	2300	1800	837,4	2000	930,4	2300	1070,0	N/A	N/A
	3,56	453	4442,6	2300	1800	837,4	2000	930,4	2300	1070,0	N/A	N/A
	4,07	453	4442,6	2300	1800	837,4	2000	930,4	2300	1070,0	N/A	N/A
	4,48	429	4207,2	2300	1800	793,0	2000	881,1	2300	1013,3	N/A	N/A
DMT460HL	4,95	381	3736,5	2300	1800	704,3	2000	782,5	2300	899,9	N/A	N/A
	3,02	453	4442,6	2300	1800	837,4	2000	930,4	2300	1070,0	N/A	N/A
	3,28	453	4442,6	2300	1800	837,4	2000	930,4	2300	1070,0	N/A	N/A
	3,56	453	4442,6	2300	1800	837,4	2000	930,4	2300	1070,0	N/A	N/A
	4,07	453	4442,6	2300	1800	837,4	2000	930,4	2300	1070,0	N/A	N/A
DMT560HL	4,48	429	4207,2	2300	1800	793,0	2000	881,1	2300	1013,3	N/A	N/A
	4,95	381	3736,5	2300	1800	704,3	2000	782,5	2300	899,9	N/A	N/A
	3,02	550	5393,9	2300	1800	1016,7	2000	1129,6	2300	1299,1	N/A	N/A
	3,28	550	5393,9	2300	1800	1016,7	2000	1129,6	2300	1299,1	N/A	N/A
	3,56	550	5393,9	2300	1800	1016,7	2000	1129,6	2300	1299,1	N/A	N/A
DMT560HL	4,07	550	5393,9	2300	1800	1016,7	2000	1129,6	2300	1299,1	N/A	N/A
	4,48	526	5158,5	2300	1800	972,3	2000	1080,3	2300	1242,4	N/A	N/A
	4,95	435	4266,0	2300	1800	804,1	2000	893,4	2300	1027,5	N/A	N/A


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APPENDIX - I

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MODEL	Reduction Ratio	Max. Input Torque (kgf.m)	Max. Input Torque (Nm)	Max.input (RPM)	RPM	Power (kW)	RPM	Power (kW)	RPM	Power (kW)	RPM	Power (kW)
DMT330DL	2,61	276	2706,7	2400	1800	510,2	2000	566,9	2300	651,9	2400	680,3
	3,10	276	2706,7	2400	1800	510,2	2000	566,9	2300	651,9	2400	680,3
	3,56	276	2706,7	2400	1800	510,2	2000	566,9	2300	651,9	2400	680,3
	4,13	276	2706,7	2400	1800	510,2	2000	566,9	2300	651,9	2400	680,3
	4,59	276	2706,7	2400	1800	510,2	2000	566,9	2300	651,9	2400	680,3
DMT450DL	3,02	453	4442,6	2400	1800	837,4	2000	930,4	2300	1070,0	2400	1116,5
	3,28	453	4442,6	2400	1800	837,4	2000	930,4	2300	1070,0	2400	1116,5
	3,56	453	4442,6	2400	1800	837,4	2000	930,4	2300	1070,0	2400	1116,5
	4,07	426	4177,8	2400	1800	787,5	2000	875,0	2300	1006,2	2400	1050,0
	4,48	361	3540,3	2400	1800	667,3	2000	741,5	2300	852,7	2400	889,7
DMT600DL	4,95	300	2942,1	2400	1800	554,6	2000	616,2	2300	708,6	2400	739,4
	2,28	625,1	6130,4	2300	1800	1155,5	2000	1283,9	2300	1476,5	N/A	N/A
	2,53	625,1	6130,4	2300	1800	1155,5	2000	1283,9	2300	1476,5	N/A	N/A
	3,02	625,1	6130,4	2300	1800	1155,5	2000	1283,9	2300	1476,5	N/A	N/A
	3,28	625,1	6130,4	2300	1800	1155,5	2000	1283,9	2300	1476,5	N/A	N/A
	3,56	625,1	6130,4	2300	1800	1155,5	2000	1283,9	2300	1476,5	N/A	N/A
	4,07	591	5795,9	2300	1800	1092,5	2000	1213,9	2300	1395,9	N/A	N/A
DMT600BL	4,48	520	5099,6	2300	1800	961,2	2000	1068,0	2300	1228,2	N/A	N/A
	4,95	432	4236,6	2300	1800	798,6	2000	887,3	2300	1020,4	N/A	N/A
	4,12	625,1	6130,4	2300	1800	1155,5	2000	1283,9	2300	1476,5	N/A	N/A
	4,48	625,1	6130,4	2300	1800	1155,5	2000	1283,9	2300	1476,5	N/A	N/A
	5,11	560	5491,9	2300	1800	1035,2	2000	1150,2	2300	1322,7	N/A	N/A
DMT600BL	5,62	502	4923,1	2300	1800	928,0	2000	1031,1	2300	1185,7	N/A	N/A
	5,91	432	4236,6	2300	1800	798,6	2000	887,3	2300	1020,4	N/A	N/A



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