



CERTIFICATE NUMBER	21-2154081-PDA
EFFECTIVE DATE	16-Sep-2021
EXPIRY DATE	15-Sep-2026
ABS TECHNICAL OFFICE	Genoa Engineering Department

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

BONFIGLIOLI RIDUTTORI SPA

located at

**VIA CAVALIER CLEMENTINO BONFIGLIOLI 1, CALDERARA DI
RENO (BOLOGNA), ITALY, Italy, 40012**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: **Gearbox**
Model: **Series 700T**
Endorsements:
Tier: **5 - Unit Certification Required**

This Product Design Assessment (PDA) Certificate remains valid until 15/Sep/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Lucio Trevisan,Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

BONFIGLIOLI RIDUTTORI SPA

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Tier: 5 - Unit Certification Required

Product: Gearbox

Model: Series 700T

Endorsements:

Intended Service:

Hoisting, Luffing and Slewing mechanism for Lifting Appliances and Drilling Systems.

Steering mechanism for Azimuthal Thrusters.

Description:

Multi stage or single stage auxiliary planetary reduction gears.

Single stages planetary reduction gears have reduction ratio among 3.43:1 and 6.23:1 and are grouped in following main types: 705T, 706T, 707T, 709T, 710T, 711T, 711TR, 712T and 714T.

Each single stage reduction gear is defined as a specific combination of sun gear, planetary gear and toothed ring.

Different planetary carriers, even if with different output splines, may grant the same gear combination.

The list of all the reduction gear stages with relevant reduction ratio and relevant main components technical drawings identification can be found in the attached document together with all the admissible compositions and sequences.

Rating:

Depending on the reduction gear composition, rated power could be greater or lower than 100 kW.

Reference maximum output dynamic torques and maximum output static torques, for each reduction gear stage, are provided in the attached document.

Above maximum output dynamic torques are provided for each Load Spectrum Class (L1, L2, L3 and L4) and for each Class of Utilization (T1, T2, T3, T4, T5, T6, T7 and T8), as defined in F.E.M. Standard 1.001 – “Rules for the Design of Hoisting Appliance”, and are based on following assumptions:

- Reference Speed: 15 rpm;

- Type of Load: Monodirectional;

- Type of Oil: ISO-VG 150.

Reference maximum output static torques are provided for single and redundant arrangements.

Service Restriction:

1) For Lifting Appliances and Drilling Systems, Unit Certification is required for these products when the rated power is 100 kW and over as per 2-1/Table 3 of the ABS Guide for Certification of Lifting Appliances and as per 3-2/Table 1 of the ABS Guide for the Classification of Drilling Systems.

2) For steering mechanism of certified thrusters (ref 4-3-5), Unit Certification is required for these products regardless of their power rating as per 4-3-1/1.1 and 4-3-1/3.1.3 of the ABS Rules Marine Vessels.

3) If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:

1) The system designer is responsible of the suitability of the selected loading spectrum, lifetime and brake capacity for the intended application. Particularly, when the gearboxes are used for transmitting the brake torque on Lifting Appliances, they are to have a static strength of at least the braking capacity of the respective brake, as per 2-6/23 of ABS CLA Guide.

2) Output pinions, output and input supports are not covered by present Certificate and need to be approved on a case-by-case basis. Output pinions and relevant shafts which are intended to be used for steering of azimuthing thruster are to be made of materials tested in the presence of the Surveyor, as per 4-3-1/3.1.3 of ABS Marine Vessel Rules.

3) Minimum Design Service Temperature (DST) is -20 °C. Where operation at lower temperature is requested, consideration shall be given to provision of adequate heating systems for the entire reduction gear or to adoption of materials with adequate fracture toughness as per 2-3/Table 2 of ABS Guide for Certification of Lifting Appliances. Relevant design information is to be submitted for review on a case-by-case basis.

4) As per Manufacturer's Gearboxes Technical Specification AQM 120 – “Coppie di Serraggio Viti”, all the connecting flanges of the Series 700T planetary gearboxes are to be fitted with Class 12.9 bolts tightened to a nominal

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Tier: 5 - Unit Certification Required

torque of 83,4 Nm (M10x1.5), 142,2 Nm (M12x1.75), 353,0 Nm (M16x2) or 691,3 Nm (M20x2.5).

5) Brake oil line is to be installed as short as possible with a minimum diameter sectional area equal to, at least, the brake outlet port diameter.

6) Hydraulic motors driving pinions for thruster steering mechanisms are to be certified by the Surveyor at Manufacturer's plant in accordance with 4-3-5/5.11 and 4-6-1/7.3 of ABS Marine Vessel Rules.

7) The Manufacturer has provided a declaration about the control of, or lack of Asbestos in this product.

Notes/Drawing/Documentation:

Drawing No. 6643020070, 709 4 09 Sun Gear, Revision: B, Pages: 1

Drawing No. 705T SR, 705T SR Drawings, Revision: 0, Pages: 0

Drawing No. 705T SR, 705T SR Drawings, Revision: 02, Pages: 0

Drawing No. 706T SR, 706T SR Drawings, Revision: 0, Pages: 0

Drawing No. 707T SR, 707T SR Drawings, Revision: 0, Pages: 0

Drawing No. 709T SR, 709T SR Drawings, Revision: 0, Pages: 0

Drawing No. 710T SR, 710T SR Drawings, Revision: 0, Pages: 0

Drawing No. 711T SR, 711T SR Drawings, Revision: 0, Pages: 0

Drawing No. 712T SR, 712T SR Drawings, Revision: 0, Pages: 0

Drawing No. 714 SR, 714 SR Drawings, Revision: 0, Pages: 0

Drawing No. AQM120, Threaded Connection Serie 700, Revision: 0, Pages: 3

Drawing No. Correspondence, 2021-09-02 - Draft Certificate acceptance, Revision: 0, Pages: 9

Drawing No. Correspondence, 2021-09-09 - Bonfiglioli replies, Revision: 0, Pages: 6

Drawing No. Correspondence, 2021-06-30 - Incoming, Revision: 0, Pages: 2

Drawing No. PDA 700T - PD, Project Main Data, Revision: 02, Pages: 0

Drawing No. PDA 700T - PD, Project Main Data, Revision: 0, Pages: 0

Drawing No. PDA 700T - PD, Project Main Data, Revision: 4, Pages: 0

Drawing No. PDA 700T - RS, Reduction Stages - Drawings List and Compositions, Revision: 02, Pages: 0

Drawing No. PDA 700T - RS, Reduction Stages - Drawings List and Compositions, Revision: 0, Pages: 0

Drawing No. PDA 700T - RS, Reduction Stages - Drawings List and Compositions, Revision: 4, Pages: 0

Drawing No. PDA 700T ABS - Project Data, Bolts Torque 700, Revision: 01, Pages: 1

Terms of Validity:

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STANDARDS

ABS Rules:

- Guide for Certification of Lifting Appliances (December 2020): 1-3/9, 2-1/Table 3, 2-3/5.3, 2-3/Table 2, 2-3/9 and 2-6/23.

- Guide for the Classification of Drilling System (February 2021): 2-7/9.7, 3-2/Table 1 and 3-2/Table 2.

- Rules for Conditions of Classification (July 2021): 1-1-4/7.7, 1-1-A3 and A4, which covers the following:

- Rules for Building and Classing Marine Vessels (July 2021): 4-3-1/1.1, 4-3-1/3.1.3, 4-3-1/5, 4-3-1/9.7, 4-3-5/5.11

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Tier: 5 - Unit Certification Required

and 4-3-5/13;

- Rules for Conditions of Classifications – Offshore Units and Structures (July 2021): 1.1.4/9.7, 1-1-A2 and A3, which covers the following:

- Rules for Building and Classing Mobile Offshore Units (July 2021): 4-1-2/3

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA

PDA 700T - Reduction Stages - Drawings

Name	1:	MWSTool	Reduction Kit	Planet Carrier	Planet gear	Pin	Sun gear	Toothed Ring
705T	3,60	705T_SR_3_60	2T235533010	6655500343	6642000110	6634510441	6643000080	6641000250
705T	4,25	705T_SR_4_25	2T235533020	6655500353	6642000070	6634510441	6643000090	6641000250
705T	5,33	705T_SR_5_33	2T235533030	6655500363	6642000080	6634510441	6643000100	6641000250
705T	6,20	705T_SR_6_20	2T235533040	6655500373	6642000100	6634510441	6643000110	6641000250
706T	3,60	706T_SR_3_60	2T235534010	6655500822	6642010101	6634510470	6643010050	6641010030
706T	4,25	706T_SR_4_25	2T235534020	6655500832	6642010111	6634510470	6643010060	6641010030
706T	5,33	706T_SR_5_33	2T235534030	6655500842	6642010121	6634510470	6643010070	6641010030
706T	6,20	706T_SR_6_20	2T235534040	6655500852	6642010131	6634510470	6643010080	6641010030
707T	3,43	707T_SR_3_43	2T235535010	6655504670	6642020050	6634520150	6643020020	6641020022
707T	4,09	707T_SR_4_09	2T235535020	6655504680	6642020060	6634520150	6643020030	6641020022
707T	5,25	707T_SR_5_25	2T235535030	6655504690	6642020070	6634520150	6643020040	6641020022
707T	6,23	707T_SR_6_23	2T235535040	6655504700	6642020080	6634520150	6643020050	6641020022
709T	3,43	709T_SR_3_43	2T235536050	6655501083	6642020090	6634520161	6643020060	6641020031
709T	4,09	709T_SR_4_09	2T235536060	6655501053	6642020100	6634520161	6643020070	6641020031
709T	4,40	709T_SR_4_40_4P	2T235346190	6655514700	6642020610	6634520550	6643021150	6641020301
709T	5,25	709T_SR_5_25	2T235536070	6655501073	6642020110	6634520161	6643020080	6641020031
709T	6,23	709T_SR_6_23	2T235536080	6655501063	6642020120	6634520161	6643020090	6641020031
709T	5,25	709T_SR_5_25_4P	2T235346200	6655515460	6642020110	6634520550	6643020080	6641020301
710T	4,09	710T_SR_4_09		6655506733	6642020400	6634510592	6643020770	6641020320
710T	5,25	710T_SR_5_25		6655506743	6642020410	6634510592	6643020780	6641020320
710T	6,23	710T_SR_6_23		6655506753	6642020420	6634510592	6643020790	6641020320
711T	4,09	711_SR_4_09	2T235347840	6655515530	6642030420	6634520580	6643030040	6641030031
711TR	4,09	711_SR_4_09_R	2T235347840	6655515530	6642030420	6634520580	6643030040	6641030130
711T	5,25	711_SR_5_25	2T235347860	6655515550	6642030440	6634520580	6643030050	6641030031
711TR	5,25	711_SR_5_25_R	2T235347860	6655515550	6642030440	6634520580	6643030050	6641030130
712T	4,40	712_SR_4_40	2T235347950	6655515370	6642030310	6634520571	6643030520	6641030130
714T	4,63	714_SR_4_63	2T235348530	6655514710	6642040380	6634520530	6643040530	6641040240

Stages	300	301	303	305	306	307	309	709	310	711	712	714
Seq. 1	300	301		705T								
Seq. 2	300		303		706T							
Seq. 3	300	301		305		707T						
Seq. 4	300	301		305				709T				
Seq. 5	300		303		306			709T				
Seq. 6	300		303		306				710T			
Seq. 7	300	301		305		307				711T		
Seq. 8a	300	301		305		307					712T	
Seq. 8b	300	301		305			309				712T	
Seq. 9	300		303		306			709T				714T

PDA 700T - Project Data - Main Data

Load Spectrums									
L1 - km = 0,1		L2 - km = 0,126		L3 - km = 0,253		L4 - km = 0,647			
Load [%]	Time [%]	Load [%]	Time [%]	Load [%]	Time [%]	Load [%]	Time [%]	Load [%]	Time [%]
100	3	100	4	100	12	100	55		
50	35	50	25	60	46	60	45		
35	62	45	51	43	42				
		35	20						

Classes of Utilisation							
Class	T1	T2	T3	T4	T5	T6	T8
Hours	400	800	1.600	3.200	6.300	12.500	50.000

Other constrains		
Speed	15	[r.p.m.]
Type of Load	Monodirectional	
Type of Oil	ISO-VG 150	

BONFIGLIOLI RIDUTTORI SPA
Reduction Gears SERIES 700T

PDA 700T - Project Data - L1

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Stage	Output Torque [Nm]							
	T1 / M1	T2 / M1	T3 / M2	T4 / M3	T5 / M4	T6 / M5	T7 / M6	T8 / M7
705_SR_3_60	7.581	6.809	6.071	5.443	4.899	4.404	3.954	3.791
705_SR_4_25	7.750	7.750	7.536	6.764	6.088	5.475	4.919	4.537
705_SR_5_33	7.750	7.345	6.406	5.595	5.185	4.530	3.950	3.445
705_SR_6_20	6.665	5.895	5.137	4.642	4.157	3.629	3.162	2.755
706_SR_3_60	13.565	13.565	13.565	12.838	11.514	10.314	9.227	8.834
706_SR_4_25	13.565	13.565	13.565	12.355	11.095	9.955	8.920	8.181
706_SR_5_33	13.565	13.500	11.789	10.348	9.545	8.348	7.289	6.364
706_SR_6_20	12.015	10.622	9.267	8.423	7.502	6.555	5.718	4.988
707_SR_3_43	13.537	12.136	10.891	9.829	8.903	8.055	7.279	7.000
707_SR_4_09	22.725	22.725	20.424	18.319	16.483	14.816	13.073	11.435
707_SR_5_25	20.349	18.026	15.761	13.912	12.766	11.179	9.774	8.545
707_SR_6_23	15.447	13.565	11.848	10.822	9.594	8.393	7.329	6.400
709_SR_3_43	20.159	18.069	16.214	14.631	13.251	11.986	10.830	10.414
709_SR_4_09	22.725	22.725	22.725	22.725	22.725	21.961	19.716	17.330
709_SR_5_25	22.725	22.725	22.725	20.868	19.150	16.769	14.661	12.817
709_SR_6_23	22.725	20.348	17.772	16.232	14.392	12.589	10.994	9.600
709_SR_4_40_4P	45.450	41.089	35.939	32.149	29.113	25.503	22.305	19.507
709_SR_5_25_4P	39.291	34.356	30.039	27.743	24.332	21.307	18.627	16.284
710M_SR_4_09	44.630	44.630	43.000	37.500	35.000	30.500	26.800	23.800
710M_SR_5_25	44.630	43.500	38.000	33.900	29.900	27.400	23.500	21.000
710M_SR_6_23	39.500	35.000	30.500	26.500	24.500	21.800	18.900	16.600
711_SR_4_09	56.451	56.451	56.451	55.122	49.289	44.028	39.277	34.827
711_SR_4_09_R	73.481	67.602	61.724	55.122	49.289	44.028	39.277	34.827
711_SR_5_25	56.451	56.451	51.027	45.345	41.354	36.272	31.764	27.815
711_SR_5_25_R	65.720	58.263	51.027	45.345	41.354	36.272	31.764	27.815
712_SR_4_40	75.268	75.268	70.641	63.666	57.256	50.238	44.010	38.552
714_SR_4_63	140.130	129.566	113.619	104.148	92.121	80.902	70.938	62.198

Stage	Output Torque [Nm]							
	T1 / M1	T2 / M2	T3 / M3	T4 / M4	T5 / M5	T6 / M6	T7 / M7	T8 / M8
705_SR_3_60	7.298	6.460	5.798	5.205	4.685	4.211	3.791	3.791
705_SR_4_25	7.695	7.695	7.205	6.468	5.823	5.237	4.704	4.288
705_SR_5_33	7.695	6.879	6.207	5.600	4.899	4.280	3.732	3.255
705_SR_6_20	6.331	5.517	4.979	4.492	3.927	3.427	2.986	2.602
706_SR_3_60	13.565	13.565	13.565	12.258	10.994	9.848	8.834	8.829
706_SR_4_25	13.565	13.565	13.181	11.803	10.601	9.512	8.523	7.735
706_SR_5_33	13.565	12.655	11.419	10.301	9.023	7.891	6.889	6.015
706_SR_6_20	11.405	9.950	8.979	8.100	7.089	6.194	5.403	4.713
707_SR_3_43	12.959	11.546	10.430	9.425	8.537	7.724	7.000	7.000
707_SR_4_09	22.725	21.799	19.520	17.515	15.761	14.137	12.366	10.817
707_SR_5_25	19.343	16.913	15.261	13.767	12.074	10.573	9.244	8.081
707_SR_6_23	14.561	12.718	11.476	10.353	9.070	7.934	6.928	6.050
709_SR_3_43	19.296	17.190	15.526	14.028	12.704	11.492	10.414	10.414
709_SR_4_09	22.725	22.725	22.725	22.725	22.725	21.000	18.741	16.394
709_SR_5_25	22.725	22.725	22.725	20.651	18.112	15.860	13.865	12.121
709_SR_6_23	21.841	19.077	17.214	15.530	13.605	11.901	10.392	9.074
709_SR_4_40_4P	44.089	38.564	34.796	31.390	27.539	24.124	21.098	18.451
709_SR_5_25_4P	36.868	32.236	29.087	26.240	23.013	20.151	17.616	15.400
710M_SR_4_09	44.630	44.630	41.300	37.200	33.700	29.500	25.800	22.600
710M_SR_5_25	41.500	36.200	32.700	29.400	25.900	22.700	19.900	17.400
710M_SR_6_23	33.000	28.800	26.000	23.400	20.500	18.000	15.700	13.700
711_SR_4_09	56.451	56.451	56.451	52.564	47.005	41.990	37.459	32.967
711_SR_4_09_R	71.521	65.800	58.952	52.564	47.005	41.990	37.459	32.967
711_SR_5_25	56.451	54.735	49.389	44.555	39.139	34.329	30.062	26.323
711_SR_5_25_R	62.496	54.735	49.389	44.555	39.139	34.329	30.062	26.323
712_SR_4_40	75.268	75.268	68.366	61.676	54.198	47.554	41.657	36.490
714_SR_4_63	138.932	121.834	109.936	99.181	87.233	76.608	67.171	58.894

BONFIGLIOLI RIDUTTORI SPA
Reduction Gears SERIES 700T

PDA 700T - Project Data - L3

21-2154081-PDA Certificate Rev. 0
Issued on: 16-Sep-2021
Expiring on: 15-Sep-2026

Stage	Output Torque [Nm]							
	T1 / M2	T2 / M3	T3 / M4	T4 / M5	T5 / M6	T6 / M7	T7 / M8	T8 / M8
705_SR_3_60	6.071	5.443	4.887	4.388	3.949	3.791	3.791	3.791
705_SR_4_25	6.769	6.764	6.073	5.455	4.912	4.537	3.959	3.490
705_SR_5_33	6.464	5.638	4.917	4.509	3.944	3.445	3.004	2.801
705_SR_6_20	5.186	4.519	3.938	3.612	3.157	2.755	2.400	2.320
706_SR_3_60	13.565	12.838	11.485	10.274	9.215	8.834	8.159	7.129
706_SR_4_25	13.565	12.355	11.068	9.917	8.909	8.181	7.148	6.308
706_SR_5_33	11.888	10.381	9.064	8.309	7.277	6.364	5.556	5.183
706_SR_6_20	9.350	8.157	7.116	6.525	5.709	4.988	4.350	4.206
707_SR_3_43	10.891	9.829	8.883	8.027	7.271	7.000	7.000	7.000
707_SR_4_09	20.424	18.319	16.233	14.582	13.052	11.435	10.002	8.751
707_SR_5_25	15.883	13.888	12.142	11.128	9.759	8.545	7.469	6.947
707_SR_6_23	11.947	10.435	9.113	8.354	7.318	6.400	5.588	5.410
709_SR_3_43	16.214	14.631	13.220	11.945	10.817	10.414	10.414	10.414
709_SR_4_09	22.725	22.725	22.725	21.880	19.692	17.330	15.159	13.263
709_SR_5_25	22.725	20.832	18.213	16.692	14.638	12.817	11.204	10.421
709_SR_6_23	17.921	15.652	13.669	12.531	10.977	9.600	8.382	8.114
709_SR_4_40_4P	36.211	31.673	27.702	25.387	22.271	19.507	17.059	16.069
709_SR_5_25_4P	30.273	26.469	23.332	21.209	18.599	16.284	14.234	13.999
710M_SR_4_09	44.000	38.700	33.800	30.500	27.200	23.900	20.900	18.300
710M_SR_5_25	34.100	29.800	26.100	23.900	21.000	18.400	16.100	15.000
710M_SR_6_23	27.100	23.700	20.700	18.900	16.600	14.500	12.700	12.300
711_SR_4_09	56.451	55.122	49.162	43.856	39.225	34.827	30.513	26.738
711_SR_4_09_R	61.660	55.122	49.162	43.856	39.225	34.827	30.513	26.738
711_SR_5_25	51.381	45.000	39.409	36.108	31.716	27.815	24.355	22.672
711_SR_5_25_R	51.381	45.000	39.409	36.108	31.716	27.815	24.355	22.672
712_SR_4_40	71.118	62.307	54.586	50.011	43.943	38.552	33.769	31.833
714_SR_4_63	114.337	100.263	87.918	80.540	70.831	62.198	54.531	52.074

Stage	Output Torque [Nm]							
	T1 / M3	T2 / M4	T3 / M5	T4 / M6	T5 / M7	T6 / M8	T7 / M8	T8 / M8
705_SR_3_60	4.785	4.296	3.857	3.791	3.791	3.767	3.603	3.481
705_SR_4_25	5.635	5.342	4.798	4.397	3.849	3.490	3.490	3.471
705_SR_5_33	4.973	4.389	3.828	3.338	2.920	2.801	2.801	2.801
705_SR_6_20	3.986	3.515	3.063	2.669	2.332	2.320	2.320	2.320
706_SR_3_60	11.236	10.052	8.993	8.834	7.933	6.943	6.724	6.498
706_SR_4_25	10.831	9.706	8.697	7.930	6.950	6.308	6.308	6.243
706_SR_5_33	9.160	8.091	7.064	6.167	5.401	5.183	5.183	5.183
706_SR_6_20	7.196	6.352	5.541	4.833	4.228	4.206	4.206	4.206
707_SR_3_43	8.708	7.869	7.111	7.000	7.000	7.000	7.000	7.000
707_SR_4_09	16.097	14.452	12.675	11.088	9.728	8.751	8.751	8.695
707_SR_5_25	12.260	10.838	9.476	8.284	7.263	6.947	6.947	6.947
707_SR_6_23	9.209	8.134	7.104	6.203	5.433	5.410	5.410	5.410
709_SR_3_43	12.959	11.709	10.580	10.414	10.414	10.414	10.414	10.414
709_SR_4_09	22.725	21.422	19.210	16.804	14.743	13.263	13.263	13.127
709_SR_5_25	18.390	16.258	14.213	12.426	10.895	10.421	10.421	10.421
709_SR_6_23	13.813	12.202	10.655	9.304	8.149	8.114	8.114	8.114
709_SR_4_40_4P	27.964	24.728	21.626	18.913	16.590	16.069	16.069	16.069
709_SR_5_25_4P	23.366	20.656	18.059	15.787	14.000	13.999	13.999	13.999
710M_SR_4_09	34.200	30.300	26.500	23.200	20.400	18.300	18.300	18.200
710M_SR_5_25	26.300	23.000	20.100	17.800	15.400	14.700	14.700	14.700
710M_SR_6_23	20.900	18.400	16.000	14.000	12.400	12.100	12.100	12.000
711_SR_4_09	48.069	42.884	38.256	33.781	29.685	26.738	26.738	26.674
711_SR_4_09_R	48.069	42.884	38.256	33.781	29.685	26.738	26.738	26.674
711_SR_5_25	39.747	35.179	30.807	26.976	23.691	22.672	22.672	22.672
711_SR_5_25_R	39.747	35.179	30.807	26.976	23.691	22.672	22.672	22.672
712_SR_4_40	55.041	48.728	42.687	37.393	32.851	31.833	31.833	31.833
714_SR_4_63	88.598	78.488	68.820	60.340	53.060	52.074	52.074	52.074

BONFIGLIOLI RIDUTTORI SPA
Reduction Gears SERIES 700T

PDA 700T - Project Data - Static

21-2154081-PDA Certificate Rev. 0
Issued on: 16-Sep-2021
Expiring on: 15-Sep-2026

Stage	Static Torque [Nm]	
	Single arrangement	Redundant arrangement
705_SR_3_60	8.167	9.800
705_SR_4_25	9.698	10.525
705_SR_5_33	10.525	10.525
705_SR_6_20	10.525	10.525
706_SR_3_60	20.556	20.556
706_SR_4_25	20.556	20.556
706_SR_5_33	20.556	20.556
706_SR_6_20	20.556	20.556
707_SR_3_43	22.562	22.562
707_SR_4_09	25.538	30.646
707_SR_5_25	34.289	34.289
707_SR_6_23	33.025	33.025
709_SR_3_43	25.525	30.630
709_SR_4_09	30.255	36.306
709_SR_5_25	34.289	34.289
709_SR_6_23	34.289	34.289
709_SR_4_40_4P	53.387	62.861
709_SR_5_25_4P	36.461	43.753
710M_SR_4_09	57.260	67.150
710M_SR_5_25	67.150	67.150
710M_SR_6_23	52.955	63.546
711_SR_4_09	84.786	101.743
711_SR_4_09_R	84.786	101.743
711_SR_5_25	108.478	110.358
711_SR_5_25_R	108.478	110.358
712_SR_4_40	90.860	109.032
714_SR_4_63	188.287	225.944