



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAS000028Z
Revision No:
3

This is to certify:

that the Gears

with type designation(s)

EP series (Planetary gears stages for fixing and rotating housing), CC series (bevel gears), PB series (Parking Brakes)

issued to

Rossi S.p.A.
Modena, Italy

is found to comply with

DNV standard DNV-ST-0378 – Offshore and platform lifting appliances

DNV standard DNV-ST-0377 – Standard for shipboard lifting appliances

DNV-OS-E101 – Drilling facilities, Edition July 2024

Application:

The design has been checked in accordance with the relevant structural requirements in IMO SOLAS 1974 Convention, including 1996 Amendments.

Planetary/bevel gear units with failsafe brakes for hoist and travelling applications.

Design Temperature, Td, according to above standard equals -20 degrees Celsius.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2025-09-26**

This Certificate is valid until **2030-09-25**.

DNV local unit: **Italy/Malta CMC**

for **DNV**

Approval Engineer: **Peder Bendik Møll**

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 USD 300 000.

Product description

EP series - Planetary gears stages
CC series - bevel gears stages
PB series - Parking Brakes

Application/Limitation

- This certificate(design assessment) is a verification of the design towards the listed rules/requirements. The assessment does not waive requirements for certification of the equipment when necessary.
- For delivery according to DNV-ST-0378 or 0377, gear unit and winch or similar is to be function and load tested according to Section 14 or 13, respectively before a DNV product certificate can be issued.
- For full compliance to SOLAS regulations, proving compliance to requirements in MSC.81(70) Pt.1, testing shall be performed together with the winch to be used in SOLAS application. After successful testing of the winch, the gears may be considered fully compliant.
- Output speed is 15 rpm. If other output speed is required, the rating values are to be interpolated as agreed.
- Output torque performance are based on unidirectional loading, alternating bending factor YM=1.00. With alternating load direction, performance values should be reduced accordingly.
- Load spectrum and classes of utilisation according to F.E.M. (1.001 3rd edition – Revised 1998.10.01) are defined below. Within each spectrum class, when actual km factor is higher than stated below, the performance must be reduced accordingly

L1 (km = 0.1)

Load	Time
100 %	1 %
53 %	10 %
44 %	89 %

L2 (km = 0.2)

Load	Time
100 %	3 %
59 %	50 %
53 %	47 %

L3 (km = 0.4)

Load	Time
100 %	8 %
78 %	48 %
60 %	44 %

L4 (km = 0.8)

Load	Time
100 %	28 %
90 %	72 %

Classes of utilisation

Class	T1	T2	T3	T4	T5	T6	T7	T8
Hours	400	800	1600	3200	6300	12500	25000	50000

EP series: Planetary gears stages

Output torque according to L1 [Nm]

Gear Name / Ratio	T1	T2	T3	T4	T5	T6	T7	T8	SOLAS
EP000-3.450	1241	1129	1035	938	848	764	688	618	829
EP000-4.161	1132	1034	954	870	796	726	662	603	691
EP000-4.920	1052	962	889	813	745	682	623	569	628
EP000-6.158	979	897	829	759	696	637	582	532	577
EP000-7.125	966	881	811	739	674	614	558	507	584
EP000-8.538	834	733	661	619	558	515	458	402	533
EP001-3.517	2016	1831	1687	1531	1392	1252	1124	1008	1291
EP001-4.174	2450	2245	2074	1891	1727	1575	1435	1306	1511
EP001-5.294	2224	2041	1892	1738	1593	1454	1326	1208	1364
EP001-6.214	2029	1883	1741	1609	1491	1380	1255	1111	1210
EP001-7.636	1584	1409	1290	1198	1091	1009	908	801	1187
EP002-3.517	2488	2292	2103	1926	1769	1623	1489	1336	1721
EP002-4.174	2921	2697	2475	2272	2090	1921	1765	1623	2015
EP002-5.294	2615	2416	2221	2041	1880	1731	1592	1466	1818
EP002-6.214	2360	2189	2024	1871	1734	1604	1442	1298	1613
EP002-7.636	1809	1628	1519	1373	1260	1137	1024	922	1469
EP003-3.517	5066	4670	4275	3912	3588	3289	3013	2761	3523
EP003-4.174	4626	4270	3917	3593	3302	3034	2785	2557	3156

EP003-5.294	4182	3859	3546	3255	2994	2753	2530	2325	2849
EP003-6.214	3843	3563	3289	3037	2810	2585	2324	2091	2110
EP003-7.636	2964	2664	2488	2251	2065	1865	1678	1511	1823
EP004-3.517	4487	4141	3795	3478	3196	2936	2695	2475	3118
EP004-4.174	5669	5234	4802	4406	4052	3724	3420	3142	3945
EP004-5.294	5059	4671	4291	3941	3627	3337	3067	2821	3561
EP004-6.214	4597	4262	3936	3635	3365	3113	2806	2525	3188
EP004-7.636	3504	3155	2943	2662	2443	2206	1986	1790	3099
EP006-3.517	6815	6192	5705	5181	4713	4280	3843	3443	4365
EP006-4.174	8543	7882	7243	6648	6116	5623	5167	4742	5523
EP006-5.294	7333	6773	6224	5718	5264	4845	4456	4100	4985
EP006-6.214	4980	4882	4791	4712	4649	4353	4014	3612	3588
EP006-7.636	4645	4229	3946	3569	3275	2957	2662	2399	3099
EP007-4.174	9713	9512	8852	8125	7474	6872	6314	5805	6947
EP007-5.294	8790	8117	7459	6852	6309	5806	5339	4913	6271
EP009-3.517	11850	10765	9917	9006	8193	7443	6752	6122	7551
EP009-4.174	13407	12259	11327	10368	9511	8719	7966	7239	8553
EP009-5.294	11695	10755	9887	9059	8319	7635	7002	6424	7696
EP009-6.214	9951	9601	8850	8158	7536	6957	6383	5743	6867
EP009-7.636	7604	6840	6386	5781	5304	4791	4312	3884	5667
EP012-3.517	15421	14200	13017	11915	10933	10027	9191	8421	10487
EP012-4.174	16901	15574	14279	13078	12006	11016	10101	9267	11879
EP012-5.294	12568	12242	11943	10951	10063	9243	8484	7791	9529
EP012-6.214	9951	9755	9572	9412	8798	8128	7381	6648	7247
EP012-7.636	7946	7490	6955	6320	5820	5258	4738	4273	5667
EP015-3.517	18184	16786	15487	14351	13409	12297	11271	10338	12063
EP015-4.174	20440	18835	17268	15815	14519	13321	12215	11205	14860
EP015-5.294	8289	7960	7416	7025	6843	6533	6370	6370	6292
EP015-5.867	10077	9439	8854	8367	7982	7697	7573	7573	7103
EP018-3.517	19730	18023	16695	15161	13783	12512	11340	10272	12798
EP018-4.174	24404	22472	20607	18866	17312	15875	14548	13337	16089
EP018-5.294	11841	11534	11264	11054	10889	10765	10698	10698	9304
EP018-6.214	15023	14720	14440	14194	13206	12193	11226	10111	11338
EP018-7.636	12495	11591	10787	9799	8996	8129	7324	6604	9056
EP021-3.517	18115	17624	17184	16809	16528	15738	14264	12921	14218
EP021-4.174	22324	21850	21403	20998	20661	19371	17751	16273	17867
EP021-5.294	10021	9738	9478	9249	9067	8929	8856	8856	7624
EP021-5.867	11544	11309	11091	10899	10745	10630	10580	10580	8808
EP022-3.517	18115	17624	17184	16809	16528	15738	14264	12921	14218
EP022-4.174	22324	21850	21403	20998	20661	19371	17751	16273	17867
EP022-5.294	10021	9738	9478	9249	9067	8929	8856	8856	7624
EP022-5.867	11544	11309	11091	10899	10745	10630	10580	10580	8808
EP030-4.091	41591	38458	35275	32340	29715	27284	25035	22979	29792
EP030-5.250	33278	30784	28340	26094	24084	22219	20447	18788	26880
EP030-5.857	29627	27417	25256	23274	21419	19441	17606	15926	25493
EP031-4.091	41591	38458	35275	32340	29715	27284	25035	22979	29792
EP031-5.250	33278	30784	28340	26094	24084	22219	20447	18788	26880
EP031-5.857	29627	27417	25256	23274	21419	19441	17606	15926	25493
EP042-4.182	61212	56484	51896	47505	43583	39955	36602	33541	33886
EP042-4.889	53392	49284	45314	41625	38328	35250	32311	29626	39742
EP042-6.000	43497	40186	36948	33972	31309	28498	25799	23379	24435
EP043-4.182	61212	56484	51896	47505	43583	39955	36602	33541	33886
EP043-4.889	53392	49284	45314	41625	38328	35250	32311	29626	39742
EP043-6.000	43497	40186	36948	33972	31309	28498	25799	23379	24435
EP060-4.091	80958	74539	68511	62747	57485	52623	48136	44045	56899
EP060-5.250	67882	62561	57454	52697	48448	44520	40890	37577	55986
EP060-5.857	60144	54877	50647	45981	42200	38273	34649	31398	53156

EP061-4.091 N120x3	80958	74539	68511	62747	57485	52623	48136	44045	59066
EP061-5.250 N120x3	67882	62561	57454	52697	48448	44520	40890	37577	55986
EP061-4.091 N140x5	80958	74539	68511	62747	57485	52623	48136	44045	59066
EP061-5.250 N140x5	67882	62561	57454	52697	48448	44520	40890	37577	55986
EP085-4.174	119822	110323	101419	92839	85083	77917	71302	65269	85111
EP085-5.294	97459	89839	82547	75747	69674	64057	58867	54129	76604
EP085-5.867	88174	81344	74731	68608	63136	58072	53390	49114	73428
EP125-4.174	158217	145640	133686	122447	112426	103172	94510	86448	119542
EP125-5.294	126945	116940	107383	98453	90482	83114	76309	70099	107554
EP125-5.867	114129	105147	96613	88622	81484	74882	68781	63211	103079
EP180-4.182	220244	198775	174375	161307	147437	134947	125012	116674	168712
EP180-4.889	192048	176519	162154	148461	136246	124961	114545	105047	157335
EP180-6.000	156743	144056	132538	121463	111573	102426	93778	84981	144483
EP250-4.182	323877	296963	272729	249209	228258	208931	191120	174902	245933
EP250-4.889	283135	259121	238631	218187	199965	183145	167634	153502	229357
EP250-6.000	231925	212186	195754	179159	164351	150668	138036	126514	210618
EP355-4.182	449730	410505	378092	345056	315655	288556	263605	240906	348614
EP355-4.889	393759	359457	331320	302560	276946	253323	231559	211747	325112
EP355-6.000	323396	295517	272500	249090	228220	208951	191179	174982	298552
EP500-4.182	630977	575008	529672	482837	441189	402836	367553	335485	491867
EP500-4.889	549812	501351	461920	421338	385224	351947	321315	293456	458712
EP500-6.000	448197	409104	377075	344287	315076	288133	263302	240694	413340
EP710-4.182	674632	614594	566012	515832	471250	430234	392536	358303	533902
EP710-4.889	731003	665956	613372	558959	510573	466028	425062	387838	624420
EP710-6.000	595828	543436	500722	456837	417768	381764	348611	318457	546578

Output torque according to L2 [Nm]

Gear Name / Ratio	T1	T2	T3	T4	T5	T6	T7	T8	SOLAS
EP000-3.450	1019	941	883	796	718	646	580	556	829
EP000-4.161	955	897	825	752	687	627	571	539	691
EP000-4.920	893	838	772	705	646	591	539	504	628
EP000-6.158	833	780	720	659	604	552	505	468	577
EP000-7.125	809	744	699	636	580	527	479	440	584
EP000-8.538	678	595	535	493	465	422	372	326	533
EP001-3.517	1670	1533	1447	1304	1175	1055	945	904	1291
EP001-4.174	2075	1950	1791	1632	1490	1358	1236	1170	1511
EP001-5.294	1899	1784	1652	1507	1376	1256	1144	1067	1364
EP001-6.214	1764	1620	1452	1325	1258	1160	1033	911	1210
EP001-7.636	1309	1164	1056	973	922	840	743	653	1187
EP002-3.517	2114	1996	1830	1678	1542	1398	1252	1197	1721
EP002-4.174	2502	2354	2161	1985	1827	1681	1545	1472	2015
EP002-5.294	2248	2113	1943	1787	1647	1517	1397	1315	1818
EP002-6.214	2076	1897	1736	1608	1498	1356	1221	1100	1613
EP002-7.636	1496	1349	1237	1163	1066	963	869	784	1469
EP003-3.517	4310	4058	3715	3401	3121	2862	2622	2528	3523
EP003-4.174	3955	3723	3416	3134	2882	2649	2434	2316	3156
EP003-5.294	3584	3371	3096	2844	2617	2408	2214	2081	2849
EP003-6.214	3357	3055	2794	2587	2412	2184	1966	1771	2110
EP003-7.636	2452	2208	2026	1903	1748	1578	1422	1283	1823
EP004-3.517	3861	3606	3306	3033	2789	2564	2335	2234	3118
EP004-4.174	4852	4566	4190	3847	3539	3255	2991	2848	3945
EP004-5.294	4340	4082	3750	3446	3173	2921	2687	2526	3561
EP004-6.214	4024	3689	3375	3127	2913	2638	2375	2140	3188
EP004-7.636	2901	2615	2399	2254	2069	1868	1685	1521	3099
EP006-3.517	5670	5232	4896	4442	4016	3604	3226	3083	4365
EP006-4.174	7303	6884	6324	5808	5346	4919	4486	4244	5523

EP006-5.294	6297	5921	5442	5002	4608	4244	3906	3674	4985
EP006-6.214	4828	4743	4672	4474	4155	3774	3398	3062	3588
EP006-7.636	3888	3506	3215	3021	2773	2505	2259	2039	3099
EP007-4.174	8949	8418	7729	7098	6533	6011	5527	5264	6947
EP007-5.294	7546	7096	6522	5994	5522	5085	4680	4403	6271
EP009-3.517	9862	9279	8511	7724	7023	6376	5780	5554	7551
EP009-4.174	11365	10713	9846	9016	8275	7532	6843	6470	8553
EP009-5.294	9973	9385	8608	7891	7250	6657	6109	5735	7696
EP009-6.214	8979	8386	7671	7106	6623	6000	5401	4866	6867
EP009-7.636	6296	5672	5204	4887	4491	4056	3656	3298	5667
EP012-3.517	13086	12354	11317	10366	9519	8737	7915	7568	10487
EP012-4.174	14401	13560	12425	11387	10460	9604	8813	8385	11879
EP012-5.294	12044	11346	10410	9550	8782	8071	7414	6966	9529
EP012-6.214	9646	9476	8881	8239	7664	6943	6256	5643	7247
EP012-7.636	6874	6237	5722	5379	4934	4460	4025	3636	5667
EP015-3.517	15722	14660	13740	12713	11674	10715	9830	9496	12063
EP015-4.174	17415	16398	15026	13770	12649	11613	10657	10139	14860
EP015-5.294	7481	7139	6824	6569	6392	6370	6370	6370	6292
EP015-5.867	8979	8519	8111	7791	7574	7573	7573	7117	7103
EP018-3.517	16591	15588	14321	12988	11800	10703	9653	9233	12798
EP018-4.174	20769	19562	17919	16413	15069	13826	12678	12057	16089
EP018-5.294	11349	11134	10951	10808	10710	10698	10698	10233	9304
EP018-6.214	14553	14291	13499	12519	11622	10559	9514	8579	11338
EP018-7.636	10654	9642	8840	8306	7626	6893	6218	5615	9056
EP021-3.517	17288	16942	16634	16337	14842	13463	12142	11614	14218
EP021-4.174	21584	21160	20788	20028	18387	16870	15469	14711	17867
EP021-5.294	9583	9340	9135	8976	8869	8856	8856	8856	7624
EP021-5.867	11179	10975	10802	10670	10580	10580	10580	10580	8808
EP022-3.517	17288	16942	16634	16337	14842	13463	12142	11614	14218
EP022-4.174	21584	21160	20788	20028	18387	16870	15469	14711	17867
EP022-5.294	9583	9340	9135	8976	8869	8856	8856	8856	7624
EP022-5.867	11179	10975	10802	10670	10580	10580	10580	10580	8808
EP030-4.091	35602	33521	30741	28195	25919	23810	21859	20837	29792
EP030-5.250	28688	26999	24870	22918	21159	19459	17884	16817	26880
EP030-5.857	25436	23032	21120	19859	18289	16623	14987	13517	25493
EP031-4.091	35602	33521	30741	28195	25919	23810	21859	20837	29792
EP031-5.250	28688	26999	24870	22918	21159	19459	17884	16817	26880
EP031-5.857	25436	23032	21120	19859	18289	16623	14987	13517	25493
EP042-4.182	52282	49256	45116	41314	37919	34778	31875	30304	33886
EP042-4.889	45748	43097	39617	36420	33466	30711	28165	26530	39742
EP042-6.000	37374	33921	31031	29205	26815	24351	22081	19936	24435
EP043-4.182	52282	49256	45116	41314	37919	34778	31875	30304	33886
EP043-4.889	45748	43097	39617	36420	33466	30711	28165	26530	39742
EP043-6.000	37374	33921	31031	29205	26815	24351	22081	19936	24435
EP060-4.091	68918	65049	59541	54444	49898	45697	41820	39798	56899
EP060-5.250	58045	54595	50108	45991	42315	38916	35775	33617	55986
EP060-5.857	50216	45644	41753	39258	36019	32705	29654	26916	53156
EP061-4.091_N120x3	68918	65049	59541	54444	49898	45697	41820	39798	59066
EP061-5.250_N120x3	58045	54595	50108	45991	42315	38916	35775	33617	55986
EP061-4.091_N140x5	68918	65049	59541	54444	49898	45697	41820	39798	59066
EP061-5.250_N140x5	58045	54595	50108	45991	42315	38916	35775	33617	55986
EP085-4.174	102051	96269	88113	80601	73898	67705	61989	58895	85111
EP085-5.294	83384	78456	72047	66161	60905	56043	51452	48251	76604
EP085-5.867	75580	71062	65274	59969	55228	50841	46786	43710	73428
EP125-4.174	134640	126913	116341	106637	97981	89703	82066	77937	119542
EP125-5.294	108447	102017	93596	85873	78980	72607	66722	62707	107554
EP125-5.867	97617	91805	84273	77356	71177	65462	60181	56348	103079

EP180-4.182	187162	162975	142897	134690	126930	119190	112740	108386	168712
EP180-4.889	163468	153873	136791	128957	118634	108883	99884	94123	157335
EP180-6.000	133750	123724	113193	105853	97292	88520	80250	72810	144483
EP250-4.182	274259	258452	236438	216165	198107	181449	166097	157820	245933
EP250-4.889	240150	226049	207082	189442	173720	159208	145825	137267	229357
EP250-6.000	197219	184351	168681	155792	142994	131168	119634	108529	210618
EP355-4.182	379572	357684	321690	298697	273390	250067	228591	217026	348614
EP355-4.889	332876	313122	286947	262165	240096	219744	200992	189014	325112
EP355-6.000	274103	257412	236225	216166	198153	181522	166183	152034	298552
EP500-4.182	530885	499990	455878	417184	381387	348424	318100	301791	491867
EP500-4.889	463353	435281	399320	364400	333328	304698	278345	261528	458712
EP500-6.000	378709	354999	326483	298217	273043	249820	228420	212218	413340
EP710-4.182	567250	534216	488643	445575	407312	372112	339758	322382	533902
EP710-4.889	614479	576379	529454	482692	441122	402855	367661	345227	624420
EP710-6.000	502415	470303	433019	395236	361612	330626	302097	281285	546578

Output torque according to L3 [Nm]

Gear Name / Ratio	T1	T2	T3	T4	T5	T6	T7	T8	SOLAS
EP000-3.450	835	751	710	683	617	559	554	550	829
EP000-4.161	797	726	687	658	602	549	537	533	691
EP000-4.920	749	684	643	619	568	519	503	499	628
EP000-6.158	700	640	598	578	532	486	466	463	577
EP000-7.125	673	612	563	527	495	460	426	393	584
EP000-8.538	549	485	432	379	364	341	308	290	533
EP001-3.517	1367	1227	1155	1114	1007	908	901	894	1291
EP001-4.174	1730	1575	1492	1428	1305	1189	1166	1158	1511
EP001-5.294	1597	1456	1364	1316	1207	1100	1064	1000	1364
EP001-6.214	1498	1332	1198	1061	979	932	857	775	1210
EP001-7.636	1080	962	864	761	721	681	617	574	1187
EP002-3.517	1782	1614	1529	1475	1334	1202	1192	1183	1721
EP002-4.174	2115	1944	1868	1760	1621	1492	1468	1458	2015
EP002-5.294	1906	1754	1673	1588	1464	1350	1311	1240	1818
EP002-6.214	1732	1569	1420	1280	1212	1150	1054	965	1613
EP002-7.636	1229	1119	1011	917	883	827	752	710	1469
EP003-3.517	3618	3315	3210	3004	2758	2538	2521	2504	3523
EP003-4.174	3339	3065	2943	2776	2555	2349	2310	2294	3156
EP003-5.294	3031	2785	2649	2521	2323	2138	2075	1966	2849
EP003-6.214	2791	2527	2287	2060	1949	1848	1696	1552	2110
EP003-7.636	2015	1833	1655	1499	1443	1352	1230	1160	1823
EP004-3.517	3231	2967	2847	2687	2473	2245	2226	2208	3118
EP004-4.174	4099	3765	3617	3410	3139	2889	2840	2822	3945
EP004-5.294	3673	3377	3216	3058	2818	2595	2520	2407	3561
EP004-6.214	3369	3052	2762	2490	2357	2235	2050	1877	3188
EP004-7.636	2385	2170	1960	1778	1711	1603	1458	1376	3099
EP006-3.517	4674	4190	3941	3803	3438	3098	3072	3047	4365
EP006-4.174	6190	5663	5402	5148	4737	4313	4231	4199	5523
EP006-5.294	5334	4906	4676	4442	4096	3774	3664	3588	4985
EP006-6.214	4711	4366	3952	3562	3371	3198	2933	2685	3588
EP006-7.636	3197	2909	2628	2383	2294	2149	1955	1844	3099
EP007-4.174	7565	6952	6684	6296	5799	5339	5250	5215	6947
EP007-5.294	6392	5879	5603	5323	4908	4522	4390	4191	6271
EP009-3.517	8161	7402	7076	6724	6115	5579	5537	5495	7551
EP009-4.174	9554	8717	8257	7923	7231	6575	6450	6402	8553
EP009-5.294	8401	7706	7309	6977	6418	5896	5719	5624	7696
EP009-6.214	7662	6940	6282	5661	5354	5078	4660	4264	6867
EP009-7.636	5177	4710	4253	3852	3707	3475	3161	2980	5667

EP012-3.517	11034	10067	9674	9161	8411	7604	7542	7481	10487
EP012-4.174	12123	11118	10660	10070	9258	8506	8362	8307	11879
EP012-5.294	10173	9339	8874	8456	7784	7159	6946	6770	9529
EP012-6.214	8861	8036	7276	6565	6217	5894	5408	4954	7247
EP012-7.636	5688	5180	4682	4251	4091	3832	3488	3291	5667
EP015-3.517	13532	12406	12027	11238	10327	9532	9470	9408	12063
EP015-4.174	14659	13443	12890	12177	11194	10285	10111	10044	14860
EP015-5.294	6775	6620	6465	6370	6370	6370	6370	6370	6292
EP015-5.867	8074	7868	7669	7573	7573	7492	6821	6412	7103
EP018-3.517	13714	12427	11800	11291	10261	9277	9202	9128	12798
EP018-4.174	17466	16008	15334	14502	13324	12232	12024	11943	16089
EP018-5.294	11051	10885	10761	10698	10698	10519	10205	10098	9304
EP018-6.214	13429	12217	11064	9979	9445	8954	8220	7526	11338
EP018-7.636	8791	8004	7233	6561	6313	5915	5384	5077	9056
EP021-3.517	16804	15631	14843	14203	12907	11669	11575	11482	14218
EP021-4.174	20991	19533	18709	17695	16257	14925	14670	14572	17867
EP021-5.294	9247	9062	8925	8856	8856	8856	8856	8856	7624
EP021-5.867	10896	10741	10627	10580	10580	10580	10434	9805	8808
EP022-3.517	16804	15631	14843	14203	12907	11669	11575	11482	14218
EP022-4.174	20991	19533	18709	17695	16257	14925	14670	14572	17867
EP022-5.294	9247	9062	8925	8856	8856	8856	8856	8856	7624
EP022-5.867	10896	10741	10627	10580	10580	10580	10434	9805	8808
EP030-4.091	30026	27553	26468	24959	22956	21099	20779	20639	29792
EP030-5.250	24417	22478	21412	19837	18770	17270	16340	15102	26880
EP030-5.857	21085	19220	17406	15742	15149	14220	12952	12166	25493
EP031-4.091	30026	27553	26468	24959	22956	21099	20779	20639	29792
EP031-5.250	24417	22478	21412	19837	18770	17270	16340	15102	26880
EP031-5.857	21085	19220	17406	15742	15149	14220	12952	12166	25493
EP042-4.182	43954	40269	38546	36485	33507	30746	30219	30014	33886
EP042-4.889	38719	35553	33797	32200	29597	27173	26455	26276	39742
EP042-6.000	30919	28259	25591	23269	22373	20985	19104	18004	24435
EP043-4.182	43954	40269	38546	36485	33507	30746	30219	30014	33886
EP043-4.889	38719	35553	33797	32200	29597	27173	26455	26276	39742
EP043-6.000	30919	28259	25591	23269	22373	20985	19104	18004	24435
EP060-4.091	57870	52940	50644	47978	44000	40313	39685	39416	56899
EP060-5.250	49011	45022	42805	39129	37345	34553	32340	29891	55986
EP060-5.857	41541	37957	34462	31330	30103	28247	25818	24253	53156
EP061-4.091_N120x3	57870	52940	50644	47978	44000	40313	39685	39416	59066
EP061-5.250_N120x3	49011	45022	42805	39129	37345	34553	32340	29891	55986
EP061-4.091_N140x5	57870	52940	50644	47978	44000	40313	39685	39416	59066
EP061-5.250_N140x5	49011	45022	42805	39129	37345	34553	32340	29891	55986
EP085-4.174	85695	78427	74958	71067	65202	59767	58730	58332	85111
EP085-5.294	70529	64745	61471	58665	54077	49628	48115	47789	76604
EP085-5.867	63943	58796	55845	50990	48961	45207	42003	39494	73428
EP125-4.174	113357	103824	99222	94191	86359	79099	77717	77190	119542
EP125-5.294	91493	84014	79877	76061	70031	64434	62538	62132	107554
EP125-5.867	82437	75731	71812	65956	63150	58127	54209	51123	103079
EP180-4.182	157246	138243	121276	117186	113970	110010	108078	107338	168712
EP180-4.889	137506	126061	116155	112241	104943	96386	93865	93246	157335
EP180-6.000	112425	102757	93246	85300	81898	76603	69947	66135	144483
EP250-4.182	229789	210228	200900	190489	174725	160136	157383	156335	245933
EP250-4.889	201457	184419	174983	167032	153347	140627	136887	135977	229357
EP250-6.000	165765	151885	138997	127123	122023	114154	104252	98545	210618
EP355-4.182	317248	289853	273187	262699	240657	220257	216421	214971	348614
EP355-4.889	278554	254654	241080	230662	211530	193713	188487	187225	325112
EP355-6.000	229811	210289	194691	178065	170883	159876	146040	138026	298552
EP500-4.182	442736	404011	384617	366229	335134	306339	300946	298919	491867

EP500-4.889	386870	353242	333725	319965	293151	268121	260795	259040	458712
EP500-6.000	316795	289527	271700	248547	238468	220110	203858	192660	413340
EP710-4.182	472874	431507	410868	391137	357930	327222	321490	319351	533902
EP710-4.889	512137	467176	440679	423154	387430	354016	344260	341941	624420
EP710-6.000	419668	383273	359335	333445	318127	291027	273490	258582	546578

Output torque according to L4 [Nm]

Gear Name / Ratio	T1	T2	T3	T4	T5	T6	T7	T8	SOLAS
EP000-3.450	685	620	608	564	555	551	546	542	829
EP000-4.161	664	605	590	557	538	534	529	525	691
EP000-4.920	626	571	554	526	503	499	496	492	628
EP000-6.158	585	535	515	492	467	463	456	445	577
EP000-7.125	559	507	479	435	414	393	383	374	584
EP000-8.538	450	394	345	320	302	290	283	276	533
EP001-3.517	1118	1009	989	919	902	895	888	880	1291
EP001-4.174	1439	1310	1282	1206	1168	1159	1151	1142	1511
EP001-5.294	1331	1212	1173	1115	1060	998	967	944	1364
EP001-6.214	1239	1094	965	860	824	775	757	739	1210
EP001-7.636	894	787	692	634	603	574	560	546	1187
EP002-3.517	1481	1335	1309	1216	1194	1184	1175	1165	1721
EP002-4.174	1781	1640	1611	1512	1469	1460	1450	1441	2015
EP002-5.294	1607	1480	1443	1367	1313	1248	1208	1185	1818
EP002-6.214	1437	1294	1166	1069	1029	967	949	931	1613
EP002-7.636	1021	921	831	782	748	711	698	686	1469
EP003-3.517	3033	2816	2759	2562	2524	2508	2491	2474	3523
EP003-4.174	2807	2581	2536	2381	2313	2297	2282	2267	3156
EP003-5.294	2551	2345	2284	2166	2077	1976	1914	1876	2849
EP003-6.214	2315	2083	1877	1718	1653	1555	1524	1495	2110
EP003-7.636	1673	1507	1360	1277	1221	1162	1140	1120	1823
EP004-3.517	2717	2493	2443	2270	2229	2211	2193	2175	3118
EP004-4.174	3449	3174	3118	2927	2844	2825	2806	2788	3945
EP004-5.294	3095	2847	2774	2629	2523	2419	2343	2297	3561
EP004-6.214	2796	2517	2268	2078	1999	1881	1844	1809	3188
EP004-7.636	1980	1786	1612	1515	1448	1379	1353	1329	3099
EP006-3.517	3818	3441	3373	3134	3077	3052	3026	3001	4365
EP006-4.174	5203	4754	4652	4377	4237	4205	4173	4142	5523
EP006-5.294	4496	4138	4034	3823	3669	3607	3493	3424	4985
EP006-6.214	3999	3601	3245	2973	2861	2691	2639	2588	3588
EP006-7.636	2655	2394	2161	2031	1941	1848	1813	1781	3099
EP007-4.174	6369	5866	5762	5410	5256	5222	5188	5153	6947
EP007-5.294	5388	4959	4833	4581	4396	4200	4117	4036	6271
EP009-3.517	6757	6191	6067	5635	5544	5503	5462	5421	7551
EP009-4.174	7982	7252	7095	6675	6459	6411	6364	6316	8553
EP009-5.294	7055	6474	6300	5975	5726	5650	5472	5363	7696
EP009-6.214	6359	5724	5157	4722	4541	4273	4188	4106	6867
EP009-7.636	4299	3875	3496	3282	3136	2986	2928	2876	5667
EP012-3.517	9246	8445	8281	7691	7554	7493	7432	7371	10487
EP012-4.174	10177	9344	9183	8622	8372	8318	8263	8208	11879
EP012-5.294	8553	7857	7650	7254	6955	6805	6591	6461	9529
EP012-6.214	7358	6631	5981	5485	5276	4964	4868	4773	7247
EP012-7.636	4727	4266	3854	3624	3463	3298	3235	3178	5667
EP015-3.517	11355	10570	10347	9616	9481	9420	9348	9272	12063
EP015-4.174	12306	11298	11103	10425	10123	10057	9991	9925	14860
EP015-5.294	6439	6370	6370	6370	6370	6370	6370	6370	6292
EP015-5.867	7649	7573	7543	7065	6754	6425	6299	6187	7103
EP018-3.517	11342	10302	10102	9382	9216	9142	9069	8995	12798

EP018-4.174	14651	13437	13205	12401	12038	11959	11879	11800	16089
EP018-5.294	10772	10698	10698	10660	10217	10146	9827	9631	9304
EP018-6.214	11191	10083	9092	8333	8013	7541	7392	7247	11338
EP018-7.636	7306	6591	5951	5591	5342	5088	4989	4901	9056
EP021-3.517	14267	12959	12707	11801	11592	11500	11407	11315	14218
EP021-4.174	17877	16395	16111	15130	14688	14591	14493	14397	17867
EP021-5.294	8917	8856	8856	8856	8856	8856	8856	8856	7624
EP021-5.867	10639	10580	10580	10580	10326	9824	9629	9444	8808
EP022-3.517	14267	12959	12707	11801	11592	11500	11407	11315	14218
EP022-4.174	17877	16395	16111	15130	14688	14591	14493	14397	17867
EP022-5.294	8917	8856	8856	8856	8856	8856	8856	8856	7624
EP022-5.867	10639	10580	10580	10580	10326	9824	9629	9444	8808
EP030-4.091	25230	23218	22800	21386	20805	20666	20527	20389	29792
EP030-5.250	20619	18950	18075	16693	16013	15131	14826	14528	26880
EP030-5.857	17593	15884	14326	13407	12813	12190	11946	11708	25493
EP031-4.091	25230	23218	22800	21386	20805	20666	20527	20389	29792
EP031-5.250	20619	18950	18075	16693	16013	15131	14826	14528	26880
EP031-5.857	17593	15884	14326	13407	12813	12190	11946	11708	25493
EP042-4.182	36854	33778	33188	31172	30256	30053	29850	29648	33886
EP042-4.889	32544	29845	29119	27542	26488	26311	25988	25457	39742
EP042-6.000	25811	23379	21129	19825	18925	18038	17674	17317	24435
EP043-4.182	36854	33778	33188	31172	30256	30053	29850	29648	33886
EP043-4.889	32544	29845	29119	27542	26488	26311	25988	25457	39742
EP043-6.000	25811	23379	21129	19825	18925	18038	17674	17317	24435
EP060-4.091	48426	44358	43581	40882	39734	39467	39199	38933	56899
EP060-5.250	41237	37901	35740	33038	31680	29946	29333	28734	55986
EP060-5.857	34665	31431	28495	26722	25533	24299	23807	23326	53156
EP061-4.091 N120x3	48426	44358	43581	40882	39734	39467	39199	38933	59066
EP061-5.250 N120x3	41237	37901	35740	33038	31680	29946	29333	28734	55986
EP061-4.091 N140x5	48426	44358	43581	40882	39734	39467	39199	38933	59066
EP061-5.250 N140x5	41237	37901	35740	33038	31680	29946	29333	28734	55986
EP085-4.174	71749	65690	64521	60605	58802	58408	58013	57621	85111
EP085-5.294	59376	54509	53010	50302	48174	47852	46999	46041	76604
EP085-5.867	53873	49574	46327	43487	41565	39569	38766	37980	73428
EP125-4.174	95062	86968	85396	80217	77813	77291	76766	76245	119542
EP125-5.294	76939	70703	68874	65286	62611	62210	61475	60277	107554
EP125-5.867	69367	63770	59800	56276	53806	51232	50244	49355	103079
EP180-4.182	131841	120828	112061	110520	108212	107480	106744	106014	168712
EP180-4.889	115384	105847	103321	97691	93977	93365	92750	92139	157335
EP180-6.000	93821	85057	77173	72753	69486	66272	64975	63815	144483
EP250-4.182	192290	176021	172925	162384	157574	156537	155495	154461	245933
EP250-4.889	168718	154535	150722	142563	137053	136151	135246	134347	229357
EP250-6.000	139000	126798	115030	108405	103514	98743	96786	95021	210618
EP355-4.182	265013	242253	237867	223400	216685	215250	213808	212377	348614
EP355-4.889	232876	213003	207591	196420	188717	187467	186212	184966	325112
EP355-6.000	192365	176109	161139	151830	144955	138296	135528	132886	298552
EP500-4.182	369256	337119	330855	310774	301314	299309	297294	295294	491867
EP500-4.889	322914	294983	287294	271916	261115	259377	257632	255899	458712
EP500-6.000	264749	242069	224925	211916	202293	193029	189134	185322	413340
EP710-4.182	394366	360078	353457	331947	321879	319761	317635	315523	533902
EP710-4.889	426943	389644	379307	359077	344682	342386	340081	337791	624420
EP710-6.000	350389	320154	301639	284377	271473	259080	253861	248755	546578

CC series - bevel gears stages

Output torque according to L1 [Nm]

Gear Name / Ratio	T1	T2	T3	T4	T5	T6	T7	T8	SOLAS
CC_125- 2.500_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	595	569	528	488	442	399	359	322	647
CC_125- 3.154_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	603	566	516	473	429	387	347	311	638
CC_125- 4.000_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	411	384	345	320	287	256	228	201	590
CC_125- 5.000_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	466	423	390	353	317	284	253	225	590
CC_125- 2.500_IN_A8x7x45_OUT_AB_32x28_for_EP_000-EP_001-EP_002	595	569	528	488	442	399	359	322	647
CC_125- 3.154_IN_A8x7x45_OUT_AB_32x28_for_EP_000-EP_001-EP_002	603	566	516	473	429	387	347	311	638
CC_125- 4.000_IN_A6x6x36_OUT_AB_32x28_for_EP_000-EP_001-EP_002	411	384	345	320	287	256	228	201	590
CC_125- 5.000_IN_A6x6x36_OUT_AB_32x28_for_EP_000-EP_001-EP_002	466	423	390	353	317	284	253	225	590
CC_160- 2.500_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1416	1314	1214	1121	1037	959	886	818	1548
CC_160- 3.154_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1299	1205	1113	1028	952	880	813	751	1548
CC_160- 4.000_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1037	964	891	817	749	685	625	570	944
CC_160- 5.000_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	957	884	816	754	698	645	596	550	944
CC_160- 2.500_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1416	1314	1214	1121	1037	959	886	818	1548
CC_160- 3.154_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1299	1205	1113	1028	952	880	813	751	1548
CC_160- 4.000_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1037	964	891	817	749	685	625	570	944
CC_160- 5.000_IN_A8x7x45_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	957	884	816	754	698	645	596	550	944
CC_200- 2.500_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1795	1717	1645	1579	1524	1478	1443	1423	3153
CC_200- 3.154_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1828	1749	1676	1611	1556	1513	1481	1470	3175
CC_200- 4.000_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1917	1835	1760	1644	1521	1403	1283	1173	1934
CC_200- 5.000_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1968	1818	1679	1551	1435	1327	1226	1132	1934

CC 200- 2.500_IN_A10x8x50_OUT_AB_58x53_for_EP_009- EP_012-EP_015-EP_022	1795	1717	1645	1579	1524	1478	1443	1423	2555
CC 200- 3.154_IN_A10x8x50_OUT_AB_58x53_for_EP_009- EP_012-EP_015-EP_022	1828	1749	1676	1611	1556	1513	1481	1470	3175
CC 200- 4.000_IN_A10x8x50_OUT_AB_58x53_for_EP_009- EP_012-EP_015-EP_022	1917	1835	1760	1644	1521	1403	1283	1173	1934
CC 200- 5.000_IN_A8x7x50_OUT_AB_58x53_for_EP_009-EP_012- EP_015-EP_022	1968	1818	1679	1551	1435	1327	1226	1132	1934
CC 250- 2.500_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	4343	4155	3980	3821	3686	3575	3466	3201	5998
CC 250- 3.154_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	4401	4211	4036	3878	3747	3468	3204	2959	5998
CC 250- 4.000_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	4006	3707	3424	3163	2927	2706	2500	2297	4070
CC 250- 5.000_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	3993	3689	3408	3148	2913	2693	2488	2298	4070
CC 250- 2.500_IN_A14x9x70_OUT_AB_58x53_for_EP_018- EP_021	4343	4155	3980	3821	3686	3575	3466	3201	5998
CC 250- 3.154_IN_A14x9x70_OUT_AB_58x53_for_EP_018- EP_021	4401	4211	4036	3878	3747	3468	3204	2959	5998
CC 250- 4.000_IN_A14x9x70_OUT_AB_58x53_for_EP_018- EP_021	4006	3707	3424	3163	2927	2706	2500	2297	4070
CC 250- 5.000_IN_A10x8x50_OUT_AB_58x53_for_EP_018- EP_021	3993	3689	3408	3148	2913	2693	2488	2298	4070
CC 250- 2.500_IN_AB_58x53_OUT_AB_78x72_for_EP_030	4343	4155	3980	3821	3686	3575	3466	3201	6029
CC 250- 3.154_IN_AB_58x53_OUT_AB_78x72_for_EP_030	4401	4211	4036	3878	3747	3469	3204	2960	6029
CC 250- 4.000_IN_AB_58x53_OUT_AB_78x72_for_EP_030	2406	2306	2212	2124	2045	1974	1914	1868	4070
CC 250- 5.000_IN_AB_58x53_OUT_AB_78x72_for_EP_030	3589	3433	3285	3148	2913	2693	2488	2298	6782
CC 250- 2.500_IN_A14x9x70_OUT_AB_78x72_for_EP_030	4343	4155	3980	3821	3686	3575	3466	3201	6029
CC 250- 3.154_IN_A14x9x70_OUT_AB_78x72_for_EP_030	4401	4211	4036	3878	3747	3469	3204	2960	6029
CC 250- 4.000_IN_A14x9x70_OUT_AB_78x72_for_EP_030	2406	2306	2212	2124	2045	1974	1914	1868	4070
CC 250- 5.000_IN_A10x8x50_OUT_AB_78x72_for_EP_030	3589	3433	3285	3148	2913	2693	2488	2298	6782
CC 320- 2.500_IN_AB_58x53_OUT_AB_78x72_for_EP_031- EP_042-EP_043	8213	7857	7526	7226	6971	6761	6603	6289	13651
CC 320- 3.154_IN_AB_58x53_OUT_AB_78x72_for_EP_031- EP_042-EP_043	8346	7986	7654	7356	7107	6891	6365	5879	13651
CC 320- 4.000_IN_AB_58x53_OUT_AB_78x72_for_EP_031- EP_042-EP_043	8245	7621	7039	6502	6017	5563	5139	4747	13626

CC_320- 5.000_IN_AB_58x53_OUT_AB_78x72_for_EP_031- EP_042-EP_043	8254	7625	7043	6506	6021	5567	5142	4750	10380
CC_320- 2.500_IN_A18x11x90_OUT_AB_78x72_for_EP_031- EP_042-EP_043	8213	7857	7526	7226	6971	6761	6603	6289	13188
CC_320- 3.154_IN_A18x11x90_OUT_AB_78x72_for_EP_031- EP_042-EP_043	8346	7986	7654	7356	7107	6891	6365	5879	13651
CC_320- 4.000_IN_A14x9x70_OUT_AB_78x72_for_EP_031- EP_042-EP_043	8245	7621	7039	6502	6017	5563	5139	4747	13626
CC_320- 5.000_IN_A14x9x70_OUT_AB_78x72_for_EP_031- EP_042-EP_043	8254	7625	7043	6506	6021	5567	5142	4750	10380
CC_320- 2.500_IN_AB_58x53_OUT_AB_88x82_for_EP_060	8213	7857	7526	7226	6971	6761	6603	6289	13651
CC_320- 3.154_IN_AB_58x53_OUT_AB_88x82_for_EP_060	8346	7986	7654	7356	7107	6891	6365	5879	13651
CC_320- 4.000_IN_AB_58x53_OUT_AB_88x82_for_EP_060	8245	7621	7039	6502	6017	5563	5139	4747	13626
CC_320- 5.000_IN_AB_58x53_OUT_AB_88x82_for_EP_060	8254	7625	7043	6506	6021	5567	5142	4750	10380
CC_320- 2.500_IN_A18x11x90_OUT_AB_88x82_for_EP_060	8213	7857	7526	7226	6971	6761	6603	6289	13188
CC_320- 3.154_IN_A18x11x90_OUT_AB_88x82_for_EP_060	8346	7986	7654	7356	7107	6891	6365	5879	13651
CC_320- 4.000_IN_A14x9x70_OUT_AB_88x82_for_EP_060	8245	7621	7039	6502	6017	5563	5139	4747	13626
CC_320- 5.000_IN_A14x9x70_OUT_AB_88x82_for_EP_060	8254	7625	7043	6506	6021	5567	5142	4750	10380
CC_400- 2.500_IN_AB_58x53_OUT_AB_98x92_for_EP_085	18490	17696	16978	16331	15784	14925	13786	12734	19374
CC_400- 3.154_IN_AB_58x53_OUT_AB_98x92_for_EP_085	18910	18105	17366	16061	14862	13741	12693	11725	19374
CC_400- 4.000_IN_AB_58x53_OUT_AB_98x79_for_EP_085	16474	15225	14064	12991	12022	11115	10267	9484	15016
CC_400- 5.000_IN_AB_58x53_OUT_AB_98x92_for_EP_085	15917	14703	13582	12546	11610	10734	9915	9159	15016
CC_400- 2.500_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	18490	17696	16978	16331	15784	14925	13786	12734	19374
CC_400- 3.154_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	18910	18105	17366	16061	14862	13741	12693	11725	19374
CC_400- 4.000_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	16474	15225	14064	12991	12022	11115	10267	9484	15016
CC_400- 5.000_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	15917	14703	13582	12546	11610	10734	9915	9159	15016

Output torque according to L2 [Nm]

Gear Name / Ratio	T1	T2	T3	T4	T5	T6	T7	T8	SOLAS
CC_125- 2.500_IN_AB_32x28_OUT_AB_32x28_for_EP_000- EP_001-EP_002	518	478	453	416	375	337	302	274	647
CC_125- 3.154_IN_AB_32x28_OUT_AB_32x28_for_EP_000- EP_001-EP_002	510	466	444	402	363	326	291	274	638
CC_125- 4.000_IN_AB_32x28_OUT_AB_32x28_for_EP_000- EP_001-EP_002	339	309	296	268	239	212	186	181	590

CC_125- 5.000_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	379	356	331	297	266	236	213	211	590
CC_125- 2.500_IN_A8x7x45_OUT_AB_32x28_for_EP_000-EP_001-EP_002	518	478	453	416	375	337	302	274	647
CC_125- 3.154_IN_A8x7x45_OUT_AB_32x28_for_EP_000-EP_001-EP_002	510	466	444	402	363	326	291	274	638
CC_125- 4.000_IN_A6x6x36_OUT_AB_32x28_for_EP_000-EP_001-EP_002	339	309	296	268	239	212	186	181	590
CC_125- 5.000_IN_A6x6x36_OUT_AB_32x28_for_EP_000-EP_001-EP_002	379	356	331	297	266	236	213	211	590
CC_160- 2.500_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1237	1159	1070	989	915	846	781	731	1548
CC_160- 3.154_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1146	1063	982	907	839	776	717	687	1548
CC_160- 4.000_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	899	848	776	709	649	592	539	528	944
CC_160- 5.000_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	844	779	720	665	615	569	532	528	944
CC_160- 2.500_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1237	1159	1070	989	915	846	781	731	1548
CC_160- 3.154_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1146	1063	982	907	839	776	717	687	1548
CC_160- 4.000_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	899	848	776	709	649	592	539	528	944
CC_160- 5.000_IN_A8x7x45_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	844	779	720	665	615	569	532	528	944
CC_200- 2.500_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1674	1605	1545	1494	1455	1428	1423	1423	3153
CC_200- 3.154_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1705	1636	1577	1528	1492	1470	1447	1386	3175
CC_200- 4.000_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1790	1699	1569	1449	1331	1217	1112	1089	1934
CC_200- 5.000_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1735	1603	1481	1368	1266	1170	1094	1087	1934
CC_200- 2.500_IN_A10x8x50_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1674	1605	1545	1494	1455	1428	1423	1423	2555
CC_200- 3.154_IN_A10x8x50_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1705	1636	1577	1528	1492	1470	1447	1386	3175
CC_200- 4.000_IN_A10x8x50_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1790	1699	1569	1449	1331	1217	1112	1089	1934

CC 200- 5.000_IN_A8x7x50_OUT_AB_58x53_for_EP_009-EP_012- EP_015-EP_022	1735	1603	1481	1368	1266	1170	1094	1087	1934
CC 250- 2.500_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	4051	3884	3737	3614	3521	3308	3056	2858	5998
CC 250- 3.154_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	4105	3940	3797	3575	3308	3058	2825	2707	5998
CC 250- 4.000_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	3532	3269	3020	2789	2581	2383	2180	2136	4070
CC 250- 5.000_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	3521	3253	3005	2776	2569	2375	2221	2205	4070
CC 250- 2.500_IN_A14x9x70_OUT_AB_58x53_for_EP_018- EP_021	4051	3884	3737	3614	3521	3308	3056	2858	5998
CC 250- 3.154_IN_A14x9x70_OUT_AB_58x53_for_EP_018- EP_021	4105	3940	3797	3575	3308	3058	2825	2707	5998
CC 250- 4.000_IN_A14x9x70_OUT_AB_58x53_for_EP_018- EP_021	3532	3269	3020	2789	2581	2383	2180	2136	4070
CC 250- 5.000_IN_A10x8x50_OUT_AB_58x53_for_EP_018- EP_021	3521	3253	3005	2776	2569	2375	2221	2205	4070
CC 250- 2.500_IN_AB_58x53_OUT_AB_78x72_for_EP_030	4051	3884	3737	3614	3521	3308	3056	2858	6029
CC 250- 3.154_IN_AB_58x53_OUT_AB_78x72_for_EP_030	4105	3940	3797	3575	3308	3059	2825	2707	6029
CC 250- 4.000_IN_AB_58x53_OUT_AB_78x72_for_EP_030	2255	2162	2076	2000	1937	1885	1847	1832	4070
CC 250- 5.000_IN_AB_58x53_OUT_AB_78x72_for_EP_030	3353	3207	3005	2776	2569	2375	2221	2205	6782
CC 250- 2.500_IN_A14x9x70_OUT_AB_78x72_for_EP_030	4051	3884	3737	3614	3521	3308	3056	2858	6029
CC 250- 3.154_IN_A14x9x70_OUT_AB_78x72_for_EP_030	4105	3940	3797	3575	3308	3059	2825	2707	6029
CC 250- 4.000_IN_A14x9x70_OUT_AB_78x72_for_EP_030	2255	2162	2076	2000	1937	1885	1847	1832	4070
CC 250- 5.000_IN_A10x8x50_OUT_AB_78x72_for_EP_030	3353	3207	3005	2776	2569	2375	2221	2205	6782
CC 320- 2.500_IN_AB_58x53_OUT_AB_78x72_for_EP_031- EP_042-EP_043	7661	7345	7068	6835	6659	6500	6004	5614	13651
CC 320- 3.154_IN_AB_58x53_OUT_AB_78x72_for_EP_031- EP_042-EP_043	7785	7473	7200	6977	6572	6076	5613	5377	13651
CC 320- 4.000_IN_AB_58x53_OUT_AB_78x72_for_EP_031- EP_042-EP_043	7271	6720	6208	5734	5306	4906	4532	4450	13626
CC 320- 5.000_IN_AB_58x53_OUT_AB_78x72_for_EP_031- EP_042-EP_043	7279	6724	6211	5737	5309	4909	4590	4558	10380
CC 320- 2.500_IN_A18x11x90_OUT_AB_78x72_for_EP_031- EP_042-EP_043	7661	7345	7068	6835	6659	6500	6004	5614	13188
CC 320- 3.154_IN_A18x11x90_OUT_AB_78x72_for_EP_031- EP_042-EP_043	7785	7473	7200	6977	6572	6076	5613	5377	13651

CC_320- 4.000_IN_A14x9x70_OUT_AB_78x72_for_EP_031-EP_042-EP_043	7271	6720	6208	5734	5306	4906	4532	4450	13626
CC_320- 5.000_IN_A14x9x70_OUT_AB_78x72_for_EP_031-EP_042-EP_043	7279	6724	6211	5737	5309	4909	4590	4558	10380
CC_320- 2.500_IN_AB_58x53_OUT_AB_88x82_for_EP_060	7661	7345	7068	6835	6659	6500	6004	5614	13651
CC_320- 3.154_IN_AB_58x53_OUT_AB_88x82_for_EP_060	7785	7473	7200	6977	6572	6076	5613	5377	13651
CC_320- 4.000_IN_AB_58x53_OUT_AB_88x82_for_EP_060	7271	6720	6208	5734	5306	4906	4532	4450	13626
CC_320- 5.000_IN_AB_58x53_OUT_AB_88x82_for_EP_060	7279	6724	6211	5737	5309	4909	4590	4558	10380
CC_320- 2.500_IN_A18x11x90_OUT_AB_88x82_for_EP_060	7661	7345	7068	6835	6659	6500	6004	5614	13188
CC_320- 3.154_IN_A18x11x90_OUT_AB_88x82_for_EP_060	7785	7473	7200	6977	6572	6076	5613	5377	13651
CC_320- 4.000_IN_A14x9x70_OUT_AB_88x82_for_EP_060	7271	6720	6208	5734	5306	4906	4532	4450	13626
CC_320- 5.000_IN_A14x9x70_OUT_AB_88x82_for_EP_060	7279	6724	6211	5737	5309	4909	4590	4558	10380
CC_400- 2.500_IN_AB_58x53_OUT_AB_98x92_for_EP_085	17278	16585	15992	15383	14235	13161	12157	11368	19374
CC_400- 3.154_IN_AB_58x53_OUT_AB_98x92_for_EP_085	17657	16598	15332	14163	13106	12117	11193	10723	19374
CC_400- 4.000_IN_AB_58x53_OUT_AB_98x79_for_EP_085	14528	13426	12230	11456	10601	9801	9053	8891	15016
CC_400- 5.000_IN_AB_58x53_OUT_AB_98x92_for_EP_085	14036	12966	11977	11063	10238	9465	8851	8789	15016
CC_400- 2.500_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	17278	16585	15992	15383	14235	13161	12157	11368	19374
CC_400- 3.154_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	17657	16598	15332	14163	13106	12117	11193	10723	19374
CC_400- 4.000_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	14528	13426	12230	11456	10601	9801	9053	8891	15016
CC_400- 5.000_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	14036	12966	11977	11063	10238	9465	8851	8789	15016

Output torque according to L3 [Nm]

Gear Name / Ratio	T1	T2	T3	T4	T5	T6	T7	T8	SOLAS
CC_125- 2.500_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	436	392	352	343	321	288	273	270	647
CC_125- 3.154_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	422	379	351	340	311	278	273	270	638
CC_125- 4.000_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	278	246	231	223	201	182	180	178	590
CC_125- 5.000_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	309	275	268	252	225	212	210	208	590
CC_125- 2.500_IN_A8x7x45_OUT_AB_32x28_for_EP_000-EP_001-EP_002	436	392	352	343	321	288	273	270	647
CC_125- 3.154_IN_A8x7x45_OUT_AB_32x28_for_EP_000-EP_001-EP_002	422	379	351	340	311	278	273	270	638

CC_125- 4.000_IN_A6x6x36_OUT_AB_32x28_for_EP_000-EP_001-EP_002	278	246	231	223	201	182	180	178	590
CC_125- 5.000_IN_A6x6x36_OUT_AB_32x28_for_EP_000-EP_001-EP_002	309	275	268	252	225	212	210	208	590
CC_160- 2.500_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1056	976	929	883	818	756	728	723	1548
CC_160- 3.154_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	969	895	866	810	750	693	685	680	1548
CC_160- 4.000_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	752	686	667	623	569	531	526	522	944
CC_160- 5.000_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	710	676	643	594	550	530	527	523	944
CC_160- 2.500_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	1056	976	929	883	818	756	728	723	1548
CC_160- 3.154_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	969	895	866	810	750	693	685	680	1548
CC_160- 4.000_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	752	686	667	623	569	531	526	522	944
CC_160- 5.000_IN_A8x7x45_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	710	676	643	594	550	530	527	523	944
CC_200- 2.500_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1569	1513	1473	1441	1423	1423	1423	1423	3153
CC_200- 3.154_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1599	1548	1509	1480	1470	1400	1382	1372	3175
CC_200- 4.000_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1535	1409	1374	1279	1171	1094	1085	1076	1934
CC_200- 5.000_IN_AB_40x36_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1461	1391	1323	1223	1131	1091	1083	1076	1934
CC_200- 2.500_IN_A10x8x50_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1569	1513	1473	1441	1423	1423	1423	1423	2555
CC_200- 3.154_IN_A10x8x50_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1599	1548	1509	1480	1470	1400	1382	1372	3175
CC_200- 4.000_IN_A10x8x50_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1535	1409	1374	1279	1171	1094	1085	1076	1934
CC_200- 5.000_IN_A8x7x50_OUT_AB_58x53_for_EP_009-EP_012-EP_015-EP_022	1461	1391	1323	1223	1131	1091	1083	1076	1934
CC_250- 2.500_IN_AB_58x53_OUT_AB_58x53_for_EP_018-EP_021	3797	3660	3563	3455	3198	2957	2849	2829	5998
CC_250- 3.154_IN_AB_58x53_OUT_AB_58x53_for_EP_018-EP_021	3819	3527	3414	3195	2957	2734	2699	2679	5998

CC 250- 4.000_IN_AB_58x53_OUT_AB_58x53_for_EP_018-EP_021	2974	2753	2676	2493	2294	2146	2128	2111	4070
CC 250- 5.000_IN_AB_58x53_OUT_AB_58x53_for_EP_018-EP_021	2965	2823	2685	2481	2296	2214	2198	2183	4070
CC 250- 2.500_IN_A14x9x70_OUT_AB_58x53_for_EP_018-EP_021	3797	3660	3563	3455	3198	2957	2849	2829	5998
CC 250- 3.154_IN_A14x9x70_OUT_AB_58x53_for_EP_018-EP_021	3819	3527	3414	3195	2957	2734	2699	2679	5998
CC 250- 4.000_IN_A14x9x70_OUT_AB_58x53_for_EP_018-EP_021	2974	2753	2676	2493	2294	2146	2128	2111	4070
CC 250- 5.000_IN_A10x8x50_OUT_AB_58x53_for_EP_018-EP_021	2965	2823	2685	2481	2296	2214	2198	2183	4070
CC 250- 2.500_IN_AB_58x53_OUT_AB_78x72_for_EP_030	3797	3660	3563	3455	3198	2957	2849	2829	6029
CC 250- 3.154_IN_AB_58x53_OUT_AB_78x72_for_EP_030	3819	3528	3415	3195	2957	2734	2699	2680	6029
CC 250- 4.000_IN_AB_58x53_OUT_AB_78x72_for_EP_030	2125	2037	1961	1907	1866	1835	1832	1832	4070
CC 250- 5.000_IN_AB_58x53_OUT_AB_78x72_for_EP_030	2965	2823	2685	2481	2296	2214	2198	2183	6782
CC 250- 2.500_IN_A14x9x70_OUT_AB_78x72_for_EP_030	3797	3660	3563	3455	3198	2957	2849	2829	6029
CC 250- 3.154_IN_A14x9x70_OUT_AB_78x72_for_EP_030	3819	3528	3415	3195	2957	2734	2699	2680	6029
CC 250- 4.000_IN_A14x9x70_OUT_AB_78x72_for_EP_030	2125	2037	1961	1907	1866	1835	1832	1832	4070
CC 250- 5.000_IN_A10x8x50_OUT_AB_78x72_for_EP_030	2965	2823	2685	2481	2296	2214	2198	2183	6782
CC 320- 2.500_IN_AB_58x53_OUT_AB_78x72_for_EP_031-EP_042-EP_043	7181	6922	6739	6595	6283	5809	5598	5558	13651
CC 320- 3.154_IN_AB_58x53_OUT_AB_78x72_for_EP_031-EP_042-EP_043	7303	7008	6784	6348	5874	5431	5361	5323	13651
CC 320- 4.000_IN_AB_58x53_OUT_AB_78x72_for_EP_031-EP_042-EP_043	6125	5723	5529	5125	4743	4469	4437	4404	13626
CC 320- 5.000_IN_AB_58x53_OUT_AB_78x72_for_EP_031-EP_042-EP_043	6129	5836	5549	5128	4745	4577	4544	4512	10380
CC 320- 2.500_IN_A18x11x90_OUT_AB_78x72_for_EP_031-EP_042-EP_043	7181	6922	6739	6595	6283	5809	5598	5558	13188
CC 320- 3.154_IN_A18x11x90_OUT_AB_78x72_for_EP_031-EP_042-EP_043	7303	7008	6784	6348	5874	5431	5361	5323	13651
CC 320- 4.000_IN_A14x9x70_OUT_AB_78x72_for_EP_031-EP_042-EP_043	6125	5723	5529	5125	4743	4469	4437	4404	13626
CC 320- 5.000_IN_A14x9x70_OUT_AB_78x72_for_EP_031-EP_042-EP_043	6129	5836	5549	5128	4745	4577	4544	4512	10380
CC 320- 2.500_IN_AB_58x53_OUT_AB_88x82_for_EP_060	7181	6922	6739	6595	6283	5809	5598	5558	13651

CC_320- 3.154_IN_AB_58x53_OUT_AB_88x82_for_EP_060	7303	7008	6784	6348	5874	5431	5361	5323	13651
CC_320- 4.000_IN_AB_58x53_OUT_AB_88x82_for_EP_060	6125	5723	5529	5125	4743	4469	4437	4404	13626
CC_320- 5.000_IN_AB_58x53_OUT_AB_88x82_for_EP_060	6129	5836	5549	5128	4745	4577	4544	4512	10380
CC_320- 2.500_IN_A18x11x90_OUT_AB_88x82_for_EP_060	7181	6922	6739	6595	6283	5809	5598	5558	13188
CC_320- 3.154_IN_A18x11x90_OUT_AB_88x82_for_EP_060	7303	7008	6784	6348	5874	5431	5361	5323	13651
CC_320- 4.000_IN_A14x9x70_OUT_AB_88x82_for_EP_060	6125	5723	5529	5125	4743	4469	4437	4404	13626
CC_320- 5.000_IN_A14x9x70_OUT_AB_88x82_for_EP_060	6129	5836	5549	5128	4745	4577	4544	4512	10380
CC_400- 2.500_IN_AB_58x53_OUT_AB_98x92_for_EP_085	16244	15179	14453	13743	12723	11763	11334	11254	19374
CC_400- 3.154_IN_AB_58x53_OUT_AB_98x92_for_EP_085	15130	13976	13528	12659	11714	10830	10691	10616	19374
CC_400- 4.000_IN_AB_58x53_OUT_AB_98x79_for_EP_085	12238	11434	10483	10137	9475	8928	8865	8802	15016
CC_400- 5.000_IN_AB_58x53_OUT_AB_98x92_for_EP_085	11819	11253	10701	9888	9150	8825	8763	8700	15016
CC_400- 2.500_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	16244	15179	14453	13743	12723	11763	11334	11254	19374
CC_400- 3.154_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	15130	13976	13528	12659	11714	10830	10691	10616	19374
CC_400- 4.000_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	12238	11434	10483	10137	9475	8928	8865	8802	15016
CC_400- 5.000_IN_AB_58x53_OUT_NW_110x3x30x35_for_EP_125	11819	11253	10701	9888	9150	8825	8763	8700	15016

Output torque according to L4 [Nm]

Gear Name / Ratio	T1	T2	T3	T4	T5	T6	T7	T8	SOLAS
CC_125- 2.500_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	357	320	301	290	273	270	268	265	647
CC_125- 3.154_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	345	309	300	282	273	270	268	265	638
CC_125- 4.000_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	224	202	197	183	180	178	176	174	590
CC_125- 5.000_IN_AB_32x28_OUT_AB_32x28_for_EP_000-EP_001-EP_002	250	235	226	213	210	208	199	190	590
CC_125- 2.500_IN_A8x7x45_OUT_AB_32x28_for_EP_000-EP_001-EP_002	357	320	301	290	273	270	268	265	647
CC_125- 3.154_IN_A8x7x45_OUT_AB_32x28_for_EP_000-EP_001-EP_002	345	309	300	282	273	270	268	265	638
CC_125- 4.000_IN_A6x6x36_OUT_AB_32x28_for_EP_000-EP_001-EP_002	224	202	197	183	180	178	176	174	590
CC_125- 5.000_IN_A6x6x36_OUT_AB_32x28_for_EP_000-EP_001-EP_002	250	235	226	213	210	208	199	190	590
CC_160- 2.500_IN_AB_32x28_OUT_AB_40x36_for_EP_003-EP_004-EP_006-EP_007	896	828	802	765	729	724	719	714	1548

CC_160- 3.154_IN_AB_32x28_OUT_AB_40x36_for_EP_003- EP_004-EP_006-EP_007	822	764	749	702	685	681	676	671	1548
CC_160- 4.000_IN_AB_32x28_OUT_AB_40x36_for_EP_003- EP_004-EP_006-EP_007	627	588	571	531	527	522	518	514	944
CC_160- 5.000_IN_AB_32x28_OUT_AB_40x36_for_EP_003- EP_004-EP_006-EP_007	603	584	557	531	527	524	520	516	944
CC_160- 2.500_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004- EP_006-EP_007	896	828	802	765	729	724	719	714	1548
CC_160- 3.154_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004- EP_006-EP_007	822	764	749	702	685	681	676	671	1548
CC_160- 4.000_IN_A8x7x50_OUT_AB_40x36_for_EP_003-EP_004- EP_006-EP_007	627	588	571	531	527	522	518	514	944
CC_160- 5.000_IN_A8x7x45_OUT_AB_40x36_for_EP_003-EP_004- EP_006-EP_007	603	584	557	531	527	524	520	516	944
CC_200- 2.500_IN_AB_40x36_OUT_AB_58x53_for_EP_009- EP_012-EP_015-EP_022	1465	1440	1423	1423	1423	1423	1423	1423	3153
CC_200- 3.154_IN_AB_40x36_OUT_AB_58x53_for_EP_009- EP_012-EP_015-EP_022	1500	1481	1470	1418	1384	1374	1365	1355	3175
CC_200- 4.000_IN_AB_40x36_OUT_AB_58x53_for_EP_009- EP_012-EP_015-EP_022	1290	1211	1177	1095	1087	1078	1069	1060	1934
CC_200- 5.000_IN_AB_40x36_OUT_AB_58x53_for_EP_009- EP_012-EP_015-EP_022	1240	1202	1146	1092	1085	1077	1061	1011	1934
CC_200- 2.500_IN_A10x8x50_OUT_AB_58x53_for_EP_009- EP_012-EP_015-EP_022	1465	1440	1423	1423	1423	1423	1423	1423	2555
CC_200- 3.154_IN_A10x8x50_OUT_AB_58x53_for_EP_009- EP_012-EP_015-EP_022	1500	1481	1470	1418	1384	1374	1365	1355	3175
CC_200- 4.000_IN_A10x8x50_OUT_AB_58x53_for_EP_009- EP_012-EP_015-EP_022	1290	1211	1177	1095	1087	1078	1069	1060	1934
CC_200- 5.000_IN_A8x7x50_OUT_AB_58x53_for_EP_009-EP_012- EP_015-EP_022	1240	1202	1146	1092	1085	1077	1061	1011	1934
CC_250- 2.500_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	3505	3237	3138	2993	2853	2833	2813	2793	5998
CC_250- 3.154_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	3240	3014	2952	2768	2702	2683	2664	2645	5998
CC_250- 4.000_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	2519	2375	2308	2148	2132	2115	2098	2081	4070
CC_250- 5.000_IN_AB_58x53_OUT_AB_58x53_for_EP_018- EP_021	2516	2439	2326	2217	2201	2186	2100	2002	4070
CC_250- 2.500_IN_A14x9x70_OUT_AB_58x53_for_EP_018- EP_021	3505	3237	3138	2993	2853	2833	2813	2793	5998

CC 250- 3.154_IN_A14x9x70_OUT_AB_58x53_for_EP_018-EP_021	3240	3014	2952	2768	2702	2683	2664	2645	5998
CC 250- 4.000_IN_A14x9x70_OUT_AB_58x53_for_EP_018-EP_021	2519	2375	2308	2148	2132	2115	2098	2081	4070
CC 250- 5.000_IN_A10x8x50_OUT_AB_58x53_for_EP_018-EP_021	2516	2439	2326	2217	2201	2186	2100	2002	4070
CC 250- 2.500_IN_AB_58x53_OUT_AB_78x72_for_EP_030	3505	3237	3138	2993	2853	2833	2813	2793	6029
CC 250- 3.154_IN_AB_58x53_OUT_AB_78x72_for_EP_030	3240	3014	2952	2769	2702	2683	2664	2645	6029
CC 250- 4.000_IN_AB_58x53_OUT_AB_78x72_for_EP_030	1994	1911	1860	1838	1832	1832	1832	1832	4070
CC 250- 5.000_IN_AB_58x53_OUT_AB_78x72_for_EP_030	2516	2439	2326	2217	2201	2186	2100	2002	6782
CC 250- 2.500_IN_A14x9x70_OUT_AB_78x72_for_EP_030	3505	3237	3138	2993	2853	2833	2813	2793	6029
CC 250- 3.154_IN_A14x9x70_OUT_AB_78x72_for_EP_030	3240	3014	2952	2769	2702	2683	2664	2645	6029
CC 250- 4.000_IN_A14x9x70_OUT_AB_78x72_for_EP_030	1994	1911	1860	1838	1832	1832	1832	1832	4070
CC 250- 5.000_IN_A10x8x50_OUT_AB_78x72_for_EP_030	2516	2439	2326	2217	2201	2186	2100	2002	6782
CC 320- 2.500_IN_AB_58x53_OUT_AB_78x72_for_EP_031-EP_042-EP_043	6706	6360	6166	5880	5605	5566	5526	5487	13651
CC 320- 3.154_IN_AB_58x53_OUT_AB_78x72_for_EP_031-EP_042-EP_043	6437	5988	5864	5500	5368	5331	5293	5255	13651
CC 320- 4.000_IN_AB_58x53_OUT_AB_78x72_for_EP_031-EP_042-EP_043	5197	4942	4784	4474	4443	4411	4376	4341	13626
CC 320- 5.000_IN_AB_58x53_OUT_AB_78x72_for_EP_031-EP_042-EP_043	5200	5041	4807	4582	4550	4518	4486	4454	10380
CC 320- 2.500_IN_A18x11x90_OUT_AB_78x72_for_EP_031-EP_042-EP_043	6706	6360	6166	5880	5605	5566	5526	5487	13188
CC 320- 3.154_IN_A18x11x90_OUT_AB_78x72_for_EP_031-EP_042-EP_043	6437	5988	5864	5500	5368	5331	5293	5255	13651
CC 320- 4.000_IN_A14x9x70_OUT_AB_78x72_for_EP_031-EP_042-EP_043	5197	4942	4784	4474	4443	4411	4376	4341	13626
CC 320- 5.000_IN_A14x9x70_OUT_AB_78x72_for_EP_031-EP_042-EP_043	5200	5041	4807	4582	4550	4518	4486	4454	10380
CC 320- 2.500_IN_AB_58x53_OUT_AB_88x82_for_EP_060	6706	6360	6166	5880	5605	5566	5526	5487	13651
CC 320- 3.154_IN_AB_58x53_OUT_AB_88x82_for_EP_060	6437	5988	5864	5500	5368	5331	5293	5255	13651
CC 320- 4.000_IN_AB_58x53_OUT_AB_88x82_for_EP_060	5197	4942	4784	4474	4443	4411	4376	4341	13626
CC 320- 5.000_IN_AB_58x53_OUT_AB_88x82_for_EP_060	5200	5041	4807	4582	4550	4518	4486	4454	10380
CC 320- 2.500_IN_A18x11x90_OUT_AB_88x82_for_EP_060	6706	6360	6166	5880	5605	5566	5526	5487	13188
CC 320- 3.154_IN_A18x11x90_OUT_AB_88x82_for_EP_060	6437	5988	5864	5500	5368	5331	5293	5255	13651

CC_320- 4.000 IN A14x9x70 OUT AB 88x82 for EP_060	5197	4942	4784	4474	4443	4411	4376	4341	13626
CC_320- 5.000 IN A14x9x70 OUT AB 88x82 for EP_060	5200	5041	4807	4582	4550	4518	4486	4454	10380
CC_400- 2.500 IN AB 58x53 OUT AB 98x92 for EP_085	13941	12878	12484	11905	11349	11269	11189	11110	19374
CC_400- 3.154 IN AB 58x53 OUT AB 98x92 for EP_085	12836	11941	11694	10967	10705	10630	10555	10480	19374
CC_400- 4.000 IN AB 58x53 OUT AB 98x79 for EP_085	10382	9873	9566	8938	8876	8814	8751	8689	15016
CC_400- 5.000 IN AB 58x53 OUT AB 98x92 for EP_085	10027	9721	9270	8835	8774	8712	8650	8589	15016
CC_400- 2.500 IN AB 58x53 OUT NW 110x3x30x35 for EP_125	13941	12878	12484	11905	11349	11269	11189	11110	19374
CC_400- 3.154 IN AB 58x53 OUT NW 110x3x30x35 for EP_125	12836	11941	11694	10967	10705	10630	10555	10480	19374
CC_400- 4.000 IN AB 58x53 OUT NW 110x3x30x35 for EP_125	10382	9873	9566	8938	8876	8814	8751	8689	15016
CC_400- 5.000 IN AB 58x53 OUT NW 110x3x30x35 for EP_125	10027	9721	9270	8835	8774	8712	8650	8589	15016

Brakes

- Standard multidisc static brake design.
- The friction coefficient for the brake has not been checked, the value has been provided by the manufacturer.
- When a gearbox is delivered for an application according to DNV-ST-0378 or 0377, the brake torque for the specific application shall be calculated taking into consideration the factor as given in [5.2.3.6] or [9.5.3.2], respectively.
Factor: 1,8 or dynamic factor if this exceeds 1.8 for the application.
- Static Torque for the brake $\geq \text{Factor} * \text{Nominal_Output_torque} / i$ (gearbox overall ratio)
- The brake torque values are based on 0 bar backpressure.

PB10

Brake Type	PB10-0075	PB10-0150	PB10-0225	PB10-0340	PB10-0420	PB10-0525	PB10-0650	PB10-0815
Static Braking Torque [Nm]	72	156	224	345	421	531	660	818

PB30

Brake Type	PB30-0250	PB30-0400	PB30-0500	PB30-0630	PB30-0800	PB30-1000	PB30-1250	PB30-1500	PB30-1700
Static Braking Torque [Nm]	265	407	509	637	809	1010	1281	1529	1741

PB90

Brake Type	PB90-0850	PB90-1250	PB90-1500	PB90-1800	PB90-2100	PB90-2600	PB90-3000	PB90-3550	PB90-4250
Static Braking Torque [Nm]	869	1304	1552	1811	2173	2680	3063	3560	4305

General Comments

- Materials with 3.1 certificates are to be used when manufacturing load carrying parts. Traceability is assumed taken care of by the manufacturer's quality system.
- Upon final installation of gear unit to foundation/frame the fastening bolts are to be pre-stressed according to procedures acceptable to the attending surveyor. We have assumed that the load carrying bolts are of 8.8 quality or higher.
- Our gear calculations are based on that optimum hardening depths have been achieved according to recognised standards and manufacturer's experience.

- Load distribution factors as stated by the manufacturer (based on his experience) have been used and we have not considered these.
- The bearing lifetime for the gear units are not evaluated in this Type Approval. It is assumed that the manufacturer delivers bearings with sufficient capacity for the class of utilisation they are intended for with respect to strength and materials.

Type Approval documentation

Marking of product

The product to be marked with manufacturer's name/trademark and type number identification

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.

Manufactured by:

Rossi S.p.A.

Production locations:

- Via Emilia Ovest, 915, 41123 Modena MO, Italy
- Via Olanda, 73100 Lecce LE, Italy