



Certificate no.:
TAS00004KW

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Brakes

with type designation(s)
Brake, FR 4" & FR 5" series

issued to

Bonfiglioli Riduttori S.p.A.
Calderara di Reno BO, BO, Italy

is found to comply with

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

Application:

See next page

Issued at **Høvik** on **2025-01-31**

This Certificate is valid until **2030-01-30**.

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

Multidisc negative brakes with coil springs. FR 4" and FR 5" series

Application/Limitation

Maximum back pressure 0bar

Values for Static brake torque is at brake, gear ratio and requirement for excess capacity ref DNV-ST-0378 section 5.2.3.6 must be accounted for when selecting the brake.

Brakes are approved for use with Bonfiglioli Riduttori S.p.A.Gear Series 300 and 700T as approved in Type Approval Certificate TAS00002XX

Table for brakes FR4" series:

Brake code	Brake designation	Number of steel discs	Number of friction discs	Number of springs	Total spring load on discs	Static braking torque
		[-]	[-]	[-]	[N]	[Nm]
2T236841830	4S17P3	2	3	2	660	17,7
2T236841850	4S26P4	2	3	3	990	26,6
YS00016132	4S35P6	2	3	4	1320	35,5
YS00001845	4S44P7	2	3	5	1650	44,4
2T236840000	4S53P8	2	3	6	1980	53,2
2T236840010	4S71P11	2	3	8	2640	71,0
YS00005612	4S79P12	2	3	9	2970	79,8
YS00002086	4S88P13	2	3	10	3300	88,7
2T236841760	4S93P9	3	4	7	2310	93,1
2T236840020	4S106P16	2	3	12	3960	106,4
2T236841800	4S110P7	5	6	5	1650	110,9
YS00002114	4S115P17	2	3	13	4290	115,3
2T23640040	4S124P18	2	3	14	4620	124,2
2T236841840	4S133P8	5	6	6	1980	133,1
2T236841790	4S146P14	3	4	11	3630	146,4
2T236841910	4S155P9	5	6	7	2310	155,2
2T236840060	4S159P23	2	3	18	5940	159,7
2T236841810	4S177P11	5	6	8	2640	177,4
2T236841970	4S212P16	4	5	12	3960	212,9
2T236840080	4S221P13	5	6	10	3300	221,8
2T236840100	4S266P16	5	6	12	3960	266,1
2T236841990	4S310P18	5	6	14	4620	310,5
2T236840140	4S332P20	5	6	15	4950	332,6
2T236840160	4S399P23	5	6	18	5940	399,2
2T236840180	4S443P26	5	6	20	6600	443,5

Table for brakes FR5" series:

Brake code	Brake designation	Number of steel discs	Number of friction discs	Number of springs	Total spring load on discs	Static brakeing torque
		[-]	[-]	[-]	[N]	[Nm]
2T236850010	5S273P11	5	6	8	3520	273,5
2T236850020	5S410P17	5	6	12	5280	410,3
YS00006296	5S82P9	2	3	6	2640	82,1
2T236851820	5S164P17	2	3	12	5280	164,1
2T236851880	5S170P7	5	6	5	2200	170,9
YS00004693	5S177P18	2	3	13	5720	177,8
YS00007053	5S191P20	2	3	14	6160	191,5
YS00005745	5S246P17	3	4	12	5280	246,2
2T236851860	5S273P7	8	9	5	2200	273,5
2T236851900	5S273P11	5	6	8	3520	273,5
2T236851850	5S328P9	8	9	6	2640	328,2
2T236851870	5S341P14	5	6	10	4400	341,9
2T236851830	5S376P16	5	6	11	4840	376,1
2T236851940	5S410P17	5	6	12	5280	410,3
2T236851890	5S437P11	8	9	8	3520	437,6
YS00019745	5S492P13	8	9	9	3960	492,3
2T236851920	5S547P14	8	9	10	4400	547,0
2T236850040	5S547P22	5	6	16	7040	547,0
2T236851840	5S649P26	5	6	19	8360	649,6
2T236850080	5S656P17	8	9	12	5280	656,4
2T236851930	5S711P18	8	9	13	5720	711,1
2T236850120	5S820P21	8	9	15	6600	820,5
2T236850160	5S1039P26	8	9	19	8360	1039,3

Type Approval documentation

Certification

In order to obtain a DNV Product Certificate, each brake shall be functional and pressure tested and NDT to be carried out according to DNV-ST-0378 Sec.3.

Marking of product

Each brake is to be marked, individually or as part of a gearbox assembly, with minimum:

- name of manufacturer
- type designation
- serial number

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:

1. Bonfiglioli Riduttori S.p.A.



Job ID: **262.1-042837-1**
Certificate no.: **TAS00004KW**

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