



TYPE APPROVAL CERTIFICATE
No. MAC050717CS/004

This is to certify that the product identified below is in compliance with the regulations herewith specified.

<i>Description</i>	Flanges for piping
<i>Type</i>	SAE FLANGE SERIES 3000 psi FROM ½" CFS80 TO 5" CFS118 FROM ½" C80..FF TO 5" C118..FF
<i>Applicant</i>	OFFICINE MECCANICHE CIOCCA S.P.A. VIA TREVIGLIO, 44 24053 BRIGNANO DI GERA D'ADDA (BG) ITALY
<i>Manufacturer</i>	OFFICINE MECCANICHE CIOCCA S.P.A.
<i>Place of manufacture</i>	VIA TREVIGLIO, 44 24053 BRIGNANO DI GERA D'ADDA (BG) ITALY
<i>Reference standards</i>	Part C, Chapter 1, Section 10 of RINA Rules
<i>Reference documents</i>	RINA TYPE APPROVAL SYSTEM

Issued in **Genoa** on **March 20, 2017**. This Certificate is valid until **March 19, 2022**



RINA Services S.p.A.
Francesco Sciacca

This certificate consists of this page and 1 enclosure



TYPE APPROVAL CERTIFICATE

No. **MAC050717CS/004**

Enclosure - Page 1 of 2

SAE FLANGE SERIES 3000 psi

Reference documents

CIOCCA drawings approved with Nos. from 4367632 to 4367642 on 12/05/2000, valid both for the flanges type CFS.. (with "O" ring groove and through holes) and for the counterflanges C..FF (without "O" ring groove and with thread holes).

Materials

Steel ASTM A105 / ST52.3

"O" Ring : Rubber NBR 90 shore

Bolts Class 12.9 (12K)

Field of application

Hydraulic Systems

Maximum Allowable Working Pressure

Size	Drawings	"O" Ring	Bolts	Max. Working Press. (bar)
1/2"	CFS080 C80..FF	18,64x3,53 N.A	M8 x 30	350
3/4"	CFS100 C100..FF	24,99x3,53 N.A	M10 x 35	350
1"	CFS102 C102..FF	32,93x3,53 N.A	M10 x 35	350
1 1/4"	CFS104 C104..FF	37,69x3,53 N.A	M10 x 40	280
1 1/2"	CFS106 C106..FF	47,22x3,53 N.A	M12 x 45	210
2"	CFS108 C108..FF	56,74x3,53 N.A	M12 x 45	210
2 1/2"	CFS110 C110..FF	69,44x3,53 N.A	M12 x 45	175
3"	CFS112 C112..FF	85,32x3,53 N.A	M16 x 55	140
3 1/2"	CFS114 C114..FF	98,02x3,53 N.A	M16 x 55	35
4"	CFS116 C116..FF	110,7x3,53 N.A	M16 x 55	35
5"	CFS118 C118..FF	136,1x3,53 N.A	M16 x 55	35



TYPE APPROVAL CERTIFICATE

No. **MAC050717CS/004**

Enclosure - Page 2 of 2

SAE FLANGE SERIES 3000 psi

Acceptance conditions

The connection of the flanges to the pipes is to be carried out according to RINA Rules Pt. C, Ch 1, Sec.10 Figure 1 and Table 14 with regard to piping service and to class of piping, using welding procedures approved by RINA and welders authorized by RINA.

The flanges are to be installed in accordance with Manufacturer's requirements.

The acceptance of flanges on board ships and other units classed with RINA is subject to satisfactory outcome of testing as per RINA Rules.

Tests carried out

Bursting test pressure at 4 times the M.A.W.P., as per RINA Tests Report Prot. No. 00/CS/1235/TO dated 07 November 2001.

Remarks

This Certificate annuls and replaces the previous one issued with No. MAC388611CS/004 on 19/12/2011.

Genoa March 20, 2017

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