

OIML Member State
The Netherlands

Number R 117/2007-B-NL1-19.03
Project number 2353542
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Issuing authority
Person responsible: NMi Certin B.V.
C. Oosterman

Applicant and
Manufacturer Total Control Systems
2515 Charleston Place,
Fort Wayne, IN 46805,
Unites states of America.

Identification of the
certified type **A measurement transducer (rotary meter)**
Type: TCS-700-xx

Characteristics See page 2

This OIML Certificate is issued under scheme B

This Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML Type Evaluation Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

R 117-1 (2007) "Dynamic measuring systems for liquids other than water"

Accuracy class 0,3; 0,5; 1,0 (for LPG)

This Certificate relates only to the metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML International Recommendation identified above. This Certificate does not bestow any form of legal international approval.

Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate was issued, partial quotation of the Certificate and of the associated OIML Type Evaluation Report(s) is not permitted, although either may be reproduced in full.

Issuing Authority **NMi Certin B.V., OIML Issuing Authority NL1**
15 April 2019


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The conformity was established by the results of tests and examinations provided in the associated reports:

- No. 2007/222 dated 20 September 2007 that includes 5 pages;
- No. NMI-10200363-01 dated 16 May 2012 that includes 9 pages;
- No. NMI-12200032-01 dated 16 May 2012 that includes 7 pages;
- No. NMI-10200329-03 dated 12 July 2013 that includes 15 pages;
- No. NMI-12200329-01 dated 7 February 2014 that includes 7 pages;
- No. NMI-13200200-02 dated 28 February 2014 that includes 13 pages;
- No. NMI-1901787-03 dated 20 August 2018 that includes 21 pages.

Characteristics of the measurement transducer (rotary meter)

In Table 1 the general characteristics of the measurement transducer (rotary meter) are presented. The construction of the measuring instrument is recorded in the Documentation folder no. TC8176-4.

Table 1 General characteristics

Maximum pressure	10,5 bar(g)
Environmental classes	M3 / E3 (including E2)
Ambient temperature range	-25 – +55 °C; condensing, open location.
Product temperature range	-30 – +50 °C
Intended for the measurement of	Liquids other than water, except liquefied gases with a maximum viscosity of 1200 mPa · s.

The complete family of meter consists of one family (which are of similar construction) and have the following flow characteristics indicated in table 2.

Table 2 General characteristics of the family of meters

Model designation	Size [mm]	Minimum flow rate [L/min]	Maximum flow rate [L/min]	MMQ [L]	Remarks
TCS-700-15	37	22	227	20	
TCS-700-20	50	38	400	50	
TCS-700-25	50	57	570	50	
TCS-700-30	75	76	800	100	
TCS-700-35	75	114	1136	100	
TCS-700-40	100	189	1892	200	
TCS-700-45	100	227	2271	200	

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Model designation	Size [mm]	Minimum flow rate [L/min]	Maximum flow rate [L/min]	MMQ [L]	Remarks
TCS-700-60	150	303	3785	200	
TCS-700-65	150	380	4540	200	