



Member State of OIML
Germany



OIML Certificate No.
R49/2006-DE1-08.01
Revision 2

OIML CERTIFICATE OF CONFORMITY

Issuing Authority

Name: Physikalisch-Technische Bundesanstalt
Address: Bundesallee 100, 38116 Braunschweig
Person responsible: Dr. M. Rinker

Applicant

Name: ZENNER International GmbH & Co. KG
Address: Römerstadt 6, 66121 Saarbrücken

Manufacturers:

ZENNER International GmbH & Co KG. Talstraße 2 09619 Mulda GERMANY	ZENNER do Brasil Instrumentos de Medição Ltda. Rua Bartolomeu de Gusmão, 2.444 Canudos – Novo Hamburgo RS CEP: 93546-000 BRAZIL
ZENNER Aquamet India Pvt Ltd. 39-B, HSIDC Industrial Estate, Sec. 31 Faridabad - 121003 INDIA	ZENNER Meters LTD 15 Dongxing Road Songjiang Industrial Zone Shanghai, 201613 P. R. China
ZENNER Coma JVC Construction Ma- chinery Company 125 D Minh Khai Street Hanoi VIETNAM	ZENNER Han Sein Thant Co. LTD No. 88, 89, 90, Ma Haw Gani Street, Quarter (1), Shwe Pyi Thar Township, Yangon Region, Republic of the Union of Myanmar

Identification of the certified type

Water meter intended for the metering of cold potable water
Type: MTK-AM, MTK-N, MTK-I, MTK-8R, MTK-CC, MTK-45, MTK-D
Based on multi jet principle with mechanical register
Viewing window (counter lens): plastic or mineral glass

Further characteristics see pages 5-7.



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This Certificate attests the conformity of the above identified type (represented by the sample or samples identified in the associated Test Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

R49-1 (2006) Metrological and technical requirements
R49-2 (2006) Test methods
R49-3 (2006) Test report format

This Certificate relates only to the metrological and technical characteristics of the type of instrument covered by the relevant OIML Recommendation identified above.

This Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated OIML Basic Type Evaluation Reports

PTB-1.5-4033816a,	dated	2008-05-13,	that includes	127 pages
PTB-1.5-4033816b,	dated	2008-05-13,	that includes	205 pages
PTB-1.5-4033816c,	dated	2008-05-13,	that includes	127 pages
PTB-1.5-4033816d,	dated	2008-05-13,	that includes	205 pages
PTB-1.5-4033816e,	dated	2008-02-29,	that includes	407 pages
PTB-1.5-4033816f,	dated	2008-05-13,	that includes	311 pages
PTB-1.5-4033816g,	dated	2008-05-13,	that includes	223 pages
PTB-1.5-4033816h,	dated	2008-05-13,	that includes	407 pages
PTB-1.5-4033816i,	dated	2008-05-13,	that includes	312 pages
PTB-1.5-4033816j,	dated	2008-05-13,	that includes	223 pages
PTB-1.5-4033816k,	dated	2008-05-13,	that includes	423 pages
PTB-1.5-4033816l,	dated	2008-05-13,	that includes	123 pages
PTB-1.5-4033816m,	dated	2008-05-13,	that includes	443 pages
MTK Q3-6,3 DN25 5R 45,	dated	2014-01-15,	that includes	39 pages
MTK Q3-6,3 DN25 8R MD,	dated	2014-01-15,	that includes	68 pages
MTK Q3-10 DN32 5R CC,	dated	2014-01-15,	that includes	36 pages
MTK Q3-10 DN32 5R 45,	dated	2014-01-15,	that includes	39 pages
MTK Q3-6,3 DN25 5R CC,	dated	2014-01-15,	that includes	36 pages
MTK Q3-6,3 DN25 7R MD,	dated	2014-01-15,	that includes	55 pages
MTK Q3-16 DN40 5R CC,	dated	2014-01-15,	that includes	36 pages
MTK Q3-16 DN40 5R 45,	dated	2014-01-15,	that includes	39 pages
MTK-D Q3-25 300,	dated	2014-01-15,	that includes	164 pages
MTK Q3-16 DN40 7R MD,	dated	2014-01-15,	that includes	55 pages
MTK Q3-16 DN40 8R MD,	dated	2014-01-15,	that includes	68 pages
MTK Q3-10 DN32 8R MD,	dated	2014-01-15,	that includes	196 pages
MTK Q3-10 DN32 8R MD CC,	dated	2014-01-15,	that includes	55 pages
MTK-D Q3-25 FL 270,	dated	2014-01-15,	that includes	63 pages
MTKD Q3-6,3 R160H,	dated	2015-05-12,	that includes	39 pages

Certificate history

Issue no.	Date	Description of the modification
Initial	2008-06-02	----
1	2014-01-31	<p>Integration of:</p> <ul style="list-style-type: none"> - radio module - version MTK-CC, MTK-45, D 8R MD, D 8R MD CC, D 7R MD and D 7R MD CC - additional measuring intervals in version D in bearing type b) <ul style="list-style-type: none"> $Q_3=6,3 \text{ m}^3/\text{h}$ R 125 in orientation „H“ and R 40 in orientation „any“ $Q_3=10 \text{ m}^3/\text{h}$ R 160 in orientation „H“ and R 50 in orientation „any“ $Q_3=16 \text{ m}^3/\text{h}$ R 160 in orientation „H“ and R 40 in orientation „any“ - temperature class T50 - additional measuring intervals <ul style="list-style-type: none"> $Q_3=6,3 \text{ m}^3/\text{h}$ R 40 in orientation „H“ R 40 in orientation „V“ R 25 in orientation „any“ R 31,5 in orientation „any“ $Q_3=10 \text{ m}^3/\text{h}$ R 40 in orientation „H“ R 50 in orientation „H“ R 40 in orientation „V“ R 25 in orientation „any“ R 31,5 in orientation „any“ $Q_3=16 \text{ m}^3/\text{h}$ R 40 in orientation „H“ and R 50 in orientation „H“ - additional nominal values $Q_3=25\text{m}^3/\text{h}$ in version MTK-D in bearing type a) with measuring intervals R 40, 50, 63, 80, 100, 125 in orientation „H“ and R 25, 31,5, 40 in orientation „V“
2	2015-05-12	<p>Integration of:</p> <ul style="list-style-type: none"> - additional measuring intervals in version D in bearing type b) <ul style="list-style-type: none"> $Q_3=6,3 \text{ m}^3/\text{h}$ R 160 in orientation „H“ - additional manufacturers specified



Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

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The Issuing Authority

Dr. M. Rinker
Head of Working Group

12.05.2015

The OIML Member

Dr. R. Schwartz
Vice-President

12.05.2015

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

Identification of the certified pattern – page 1 continued

Type details:

Type MTK, MTK-N, MTK-8R, MTK-CC, MTK-45, MTK-D

a) Lower bearing plate without bush and jewel, magnet clamp in polyamide.

Q ₃	m ³ /h	6.3		10	
Q ₄	m ³ /h	7.875		12.5	
Q ₂ /Q ₁	---	1.6		1.6	
Length	mm	≥175 ²⁾	≥ 175 ¹⁾	≥175 ²⁾	≥175 ²⁾
Nominal diameter	DN	25	32	25	32
Connection dimensions	---	G 1 ¼ B	G 1 ½ B	G 1 ¼ B	G 1 ½ B
Q ₁ (orientation H)	m ³ /h	0.157 / 0.126 / 0.100 / 0.079 / 0.063		0.250 / 0.200 / 0.159 / 0.125 / 0.100 / 0.080	
Q ₂ (orientation H)	m ³ /h	0.252 / 0.202 / 0.160 / 0.126 / 0.101		0.400 / 0.320 / 0.254 / 0.200 / 0.160 / 0.128	
Q ₃ /Q ₁ (orientation H)	---	40 / 50 / 63 / 80 / 100		40 / 50 / 63 / 80 / 100 / 125	
Q ₁ (orientation V)	m ³ /h	0.200 / 0.157 / 0.126		0.317 / 0.250 / 0.200	
Q ₂ (orientation V)	m ³ /h	0.320 / 0.252 / 0.202		0.508 / 0.400 / 0.320	
Q ₃ /Q ₁ (orientation V)	---	31.5 / 40 / 50		31.5 / 40 / 50	
Q ₁ (orientation any) ⁴⁾	m ³ /h	0.252 / 0.200 / 0.158		0.400 / 0.317 / 0.250	
Q ₂ (orientation any) ⁴⁾	m ³ /h	0.403 / 0.320 / 0.252		0.640 / 0.508 / 0.400	
Q ₃ /Q ₁ (orientation any) ⁴⁾	---	25 / 31.5 / 40		25 / 31.5 / 40	
Minimum straight length of inlet pipe	mm	0			
Minimum straight length of outlet pipe	mm	0			
Flow conditioner	---	none			
Verification scale interval	ℓ	0.02 or 0.05 or 0.1 or 0.5			
Accuracy class	---	2			
Temperature class	---	T30 / T50			
Maximum admissible pressure	bar	16			
Maximum admissible temperature	°C	50			
Indicating range	m ³	99999			
Maximum pressure loss at Q ₃	bar	0,63		0.63	

Q ₃	m ³ /h	16		25
Q ₄	m ³ /h	20		31.25
Q ₂ /Q ₁	---	1.6		1.6
Length	mm	≥ 270 ³⁾	≥ 270	≥ 270
Nominal diameter	DN	40	50	50
Connection dimensions	---	G 2 B	G 2 ½ B or flange	G 2 ½ B or flange
Q ₁ (orientation H)	m ³ /h	0.400 / 0.320 / 0.254 / 0.200 / 0.160 / 0.128		0.625 / 0.500 / 0.396 / 0.312 / 0.250 / 0.200
Q ₂ (orientation H)	m ³ /h	0.640 / 0.512 / 0.406 / 0.320 / 0.256 / 0.205		0.1000 / 0.800 / 0.633 / 0.499 / 0.400 / 0.320
Q ₃ /Q ₁ (orientation H)	---	40 / 50 / 63 / 80 / 100 / 125		40 / 50 / 63 / 80 / 100 / 125
Q ₁ (orientation V)	m ³ /h	----		0.1000 / 0.793 / 0.625
Q ₂ (orientation V)	m ³ /h	----		0.1600 / 0.1268 / 0.1000
Q ₃ /Q ₁ (orientation V)		----		25 / 31.5 / 40
Q ₁ (orientation any) ⁴⁾	m ³ /h	0.640		---
Q ₂ (orientation any) ⁴⁾	m ³ /h	1.024		---
Q ₃ /Q ₁ (orientation any) ⁴⁾	---	25		---
Minimum straight length of inlet pipe	mm	0		
Minimum straight length of outlet pipe	mm	0		
Flow conditioner	---	none		
Verification scale interval	<i>ℓ</i>	0.02 or 0.05 or 0.1 or 0.5		
Accuracy class	---	2		
Temperature class	---	T30 / T50		
Maximum admissible pressure	bar	16		
Maximum admissible temperature	°C	50		
Indicating range	m ³	99999		
Maximum pressure loss at Q ₃	bar	0.40	0.63	

Typ MTK-D

b) Lower bearing plate with bush and jewel, magnet clamp in polyamide.

Q ₃	m ³ /h	6.3		10		16	
Q ₄	m ³ /h	7.875		12.5		20	
Q ₂ /Q ₁	---	1.6		1.6		1.6	
Length	mm	≥175 ²⁾	≥ 175 ¹⁾	≥175 ²⁾	≥175 ²⁾	≥ 270 ³⁾	≥ 270
Nominal diameter	DN	25	32	25	32	40	50
Connection dimensions	---	G 1 ¼ B	G 1 ½ B	G 1 ¼ B	G 1 ½ B	G 2 B	G 2 ½ B or flange
Q ₁ (orientation H)	m ³ /h	0.157 / 0.126 / 0.100 / 0.79 / 0.63 / 0.50 / 0.040		0.250 / 0.200 / 0.159 / 0.125 / 0.100 / 0.80 / 0.62		0.400 / 0.320 / 0.254 / 0.200 / 0.160 / 0.128 / 0.100	
Q ₂ (orientation H)	m ³ /h	0.252 / 0.202 / 0.160 / 0.126 / 0.101 / 0.80 / 0.063		0.400 / 0.320 / 0.254 / 0.200 / 0.160 / 0.128 / 0.100		0.640 / 0.512 / 0.406 / 0.320 / 0.256 / 0.205 / 0.160	
Q ₃ /Q ₁ (orientation H)	---	40 / 50 / 63 / 80 / 100 / 125 / 160		40 / 50 / 63 / 80 / 100 / 125 / 160		40 / 50 / 63 / 80 / 100 / 125 / 160	
Q ₁ (orientation V)	m ³ /h	---		---		----	
Q ₂ (orientation V)	m ³ /h	---		---		----	
Q ₃ /Q ₁ (orientation V)		---		---		----	
Q ₁ (orientation any) ⁴⁾	m ³ /h	0.252 / 0.200 / 0.158		0.400 / 0.317 / 0.250 / 0.200		0.640 / 0.508 / 0.400	
Q ₂ (orientation any) ⁴⁾	m ³ /h	0.403 / 0.320 / 0.252		0.640 / 0.508 / 0.400 / 0.320		0.1024 / 0.813 / 0.640	
Q ₃ /Q ₁ (orientation any) ⁴⁾	---	25 / 31.5 / 40		25 / 31.5 / 40 / 50		25 / 31.5 / 40	
Minimum straight length of inlet pipe	mm	0					
Minimum straight length of outlet pipe	mm	0					
Flow conditioner	---	none					
Verification scale interval	ℓ	0.02					
Accuracy class	---	2					
Temperature class	---	T30 / T50					
Maximum admissible pressure	bar	16					
Maximum admissible temperature	°C	50					
Indicating range	m ³	99999					
Maximum pressure loss at Q ₃	bar	0.63		0.63		0.40	

Note for all tables: ¹⁾ Riser pipe version ≤ 150 mm, ²⁾ Riser pipe version = 150 mm, ³⁾ Riser pipe version 150 mm and 200 mm, ⁴⁾ Meter installation in horizontal, vertical or inclined pipe, no overhead orientation (i.e. no face down meter)