

Ningbo Water Meter(Group) Co., Ltd.

宁波水表(集团)股份有限公司

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CALIBRATION CERTIFICATE

Testing Location : Ningbo Water Meter (Group) Co.,Ltd.		Testing Environment :				
PO# VEC-021/20&VEC-022/20		Meter Size :DN50(50mm)		Flowrate(m3/h) : 40/0.8/0.5		
Serial No : 20 000001~30 20 000153~160		Meter Type :Woltman Water Meter		Pressure(MPa) : 1.6MPa		
Customer : VECTRUM SPA		Meter Class : R80		Temperature(C) :18		
Type Of Test : Q3 Q2 Q1		Meter Model : WPH-SDC DN50 PN16 R80		Printed Date :		
Tested By : Ma/Zhang/Wu		Testing Date : Sep.2020				
Serial No.	Pressure Test		Q3	Q2	Q1	Remark
	Pass		Error (%)	Error (%)	Error (%)	
VEC-021/20						
20 000001	Pass		-1.5	+1.2	+2.5	OK
20 000002	Pass		-1.2	+1.5	+2.5	OK
20 000003	Pass		-1.4	+1	+3	OK
20 000004	Pass		-1.2	+1.8	+4	OK
20 000005	Pass		-1.4	+1.5	+3	OK
20 000006	Pass		-1.4	+1.7	+4	OK
20 000007	Pass		-1.6	+1.7	+4	OK
20 000008	Pass		-1.8	+1.7	+4	OK
20 000009	Pass		-1.4	+1.7	+3.5	OK
20 000010	Pass		-1.4	+1.7	+3.5	OK
20 000011	Pass		-1.3	+1.8	+4	OK
20 000012	Pass		-1.5	+1.7	+4	OK
20 000013	Pass		-1.3	+1.6	+3.5	OK
20 000014	Pass		-1.4	+1.7	+3	OK
20 000015	Pass		-0.7	+1.8	+3	OK
20 000016	Pass		-1.5	+1.6	+3.5	OK
20 000017	Pass		-1.3	+1.4	+4	OK
20 000018	Pass		-1.2	+1.5	+3	OK
20 000019	Pass		-1.3	+1.5	+4	OK
20 000020	Pass		-1.2	+1.5	+4	OK
20 000021	Pass		-1.3	+1.6	+3	OK
20 000022	Pass		-1.4	+1.3	+2	OK
20 000023	Pass		-1.3	+1	+2.5	OK
20 000024	Pass		-1.3	+1.2	+2	OK
20 000025	Pass		-1.2	+1.7	+3	OK
20 000026	Pass		-1.4	+1.2	+3.5	OK
20 000027	Pass		-1.3	+1.4	+3	OK
20 000028	Pass		-1.4	+1	+3.5	OK
20 000029	Pass		-1.2	+1.7	+2	OK
20 000030	Pass		-1.3	+1.6	+3	OK
VEC-022/20						
20 000153	Pass		-1.5	+1.6	+3.5	OK
20 000154	Pass		-1.5	+1.5	+2	OK
20 000155	Pass		-1.3	+1.8	+4	OK
20 000156	Pass		-1.2	+1.8	+4	OK
20 000157	Pass		-1.3	+1.4	+3	OK
20 000158	Pass		-1.4	+1.5	+4	OK
20 000159	Pass		-1.3	+1.2	+2	OK
20 000160	Pass		-1.4	+1.5	+2	OK

CALIBRATION CERTIFICATE

Testing Location : Ningbo Water Meter (Group) Co.,Ltd.		Testing Environment :				
PO#VEC-021/20&VEC-022/20		Meter Size :DN80(80mm)		Flowrate(m3/h) :63/1.25/0.8		
Serial No : 20 000031~70 20 000161~164		Meter Type : Woltman Water Meter		Pressure(MPa) : 1.6MPa		
Customer : VECTRUM SPA		Meter Class : R80		Temperature(C) : 18		
Type Of Test : Q3 Q2 Q1		Meter Model : WPH-SDC DN80 PN16 R80		Printed Date :		
Tested By: Ma/Zhang/Wu		Testing Date : Sep.2020				
Serial No.	Pressure Test		Q3	Q2	Q1	Remark
	Pass		Error (%)	Error (%)	Error (%)	

VEC-021/20					
20 000031	Pass	-1.5	+1.7	+3	OK
20 000032	Pass	-1.8	+1.7	+2.5	OK
20 000033	Pass	-1.4	+1.2	+2.5	OK
20 000034	Pass	-1.6	+1.2	+1.7	OK
20 000035	Pass	-1.5	+1.7	+2.5	OK
20 000036	Pass	-1.6	+1.3	+2.5	OK
20 000037	Pass	-1.3	+1.5	+1.2	OK
20 000038	Pass	-1.5	+1.4	+2	OK
20 000039	Pass	-1.6	+1.7	+2.5	OK
20 000040	Pass	-1.4	+1.7	+1.5	OK
20 000041	Pass	-1.6	+1.5	+2	OK
20 000042	Pass	-1.6	+1.3	+2	OK
20 000043	Pass	-1.3	+1.5	+1.5	OK
20 000044	Pass	-1.4	+1.7	+2.5	OK
20 000045	Pass	-1.4	+1.7	+2	OK
20 000046	Pass	-1.5	+1.2	+2	OK
20 000047	Pass	-1.2	+1.6	+2.5	OK
20 000048	Pass	-1.5	+1.3	+1	OK
20 000049	Pass	-1.4	+1.5	+3	OK
20 000050	Pass	-1.3	+1.5	+1.7	OK
20 000051	Pass	-1.5	+1.4	+2	OK
20 000052	Pass	-1.3	+1.2	+3	OK
20 000053	Pass	-1.3	+1.5	+0.7	OK
20 000054	Pass	-1.2	+1.5	+2	OK
20 000055	Pass	-1.6	+1.3	+3	OK
20 000056	Pass	-1.5	+1.2	+2.5	OK
20 000057	Pass	-1.5	+1.2	+2	OK
20 000058	Pass	-1.4	+1.2	+2.5	OK
20 000059	Pass	-1.2	+1.7	+2	OK
20 000060	Pass	-1.4	+0.8	+1.7	OK
20 000061	Pass	-1	+0.6	+2	OK
20 000062	Pass	-1.5	+0.8	+2	OK
20 000063	Pass	-1.4	+1.2	+2.5	OK
20 000064	Pass	-1.5	0	+0.5	OK
20 000065	Pass	-1.6	+1.2	+2	OK
20 000066	Pass	-1.5	+1.2	+2.5	OK
20 000067	Pass	-1.7	+1.6	+2	OK
20 000068	Pass	-1.4	+1.5	+2.5	OK
20 000069	Pass	-1.4	+1.2	+3	OK
20 000070	Pass	-1.4	+1.5	+1.4	OK
VEC-022/20					OK
20 000161	Pass	-1.5	+1.8	+3	OK
20 000162	Pass	-1.7	+1.2	+2	OK
20 000163	Pass	-1.3	+1.5	+2	OK
20 000164	Pass	-1.5	+1.7	+2	OK

CALIBRATION CERTIFICATE

Testing Location : Ningbo Water Meter (Group) Co.,Ltd.		Testing Environment :			
PO#VEC-021/20&VEC-022/20		Meter Size :DN100(100mm)		Flowrate(m3/h) :100/2/1.25	
Serial No : 20 000071~100 20 000165		Meter Type : Woltman Water Meter		Pressure(MPa) : 1.6MPA	
Customer : VECTRUM SPA		Meter Class : R80		Temperature(C) : 18	
Type Of Test : Q3 Q2 Q1		Meter Model : WPH-SDC DN100 PN16 R80		Printed Date :	
Tested By: Ma/Zhang/Wu		Testing Date : Sep.2020			
Serial No.	Pressure Test	Q3	Q2	Q1	Remark
	Pass	Error (%)	Error (%)	Error (%)	
VEC-021/20					
20 000071	Pass	-1.6	+1.8	+3	OK
20 000072	Pass	-1.2	+1.7	+2.5	OK
20 000073	Pass	-1.5	+1.8	+3	OK
20 000074	Pass	-1.6	+1.3	+2.5	OK
20 000075	Pass	-1.7	+0.6	+2.5	OK
20 000076	Pass	-1.6	+1.8	+3	OK
20 000077	Pass	-1.8	+1.9	+2.5	OK
20 000078	Pass	-1.5	+1.8	+2	OK
20 000079	Pass	-1.4	+1.8	+4	OK
20 000080	Pass	-1.7	+1.6	+2	OK
20 000081	Pass	-1.8	+1.7	+1.5	OK

20 000082	Pass	-1.6	+1.7	+3	OK
20 000083	Pass	-1.5	+1.8	+2.5	OK
20 000084	Pass	-1.5	+1.7	+2	OK
20 000085	Pass	-1.6	+1.7	+2	OK
20 000086	Pass	-1.6	+1.5	+4	OK
20 000087	Pass	-1.7	+1.6	+3	OK
20 000088	Pass	-1.4	+1.7	+3	OK
20 000089	Pass	-1.8	+1.9	+2.5	OK
20 000090	Pass	-1.6	+1.8	+2	OK
20 000091	Pass	-1.4	+1.7	+2	OK
20 000092	Pass	-1.8	+1.7	+2	OK
20 000093	Pass	-1.6	+1.7	+2	OK
20 000094	Pass	-1.7	+1.8	+2	OK
20 000095	Pass	-1.4	+1.8	+2	OK
20 000096	Pass	-1.6	+1.8	+2.5	OK
20 000097	Pass	-1.7	+1.6	+3	OK
20 000098	Pass	-1.7	+1.6	+2.5	OK
20 000099	Pass	-1.3	+1.8	+2.5	OK
20 000100	Pass	-1.6	+1.7	+3	OK
VEC-022/20					OK
20 000165	Pass	-1.6	+1.8	+2	OK

CALIBRATION CERTIFICATE

Testing Location : Ningbo Water Meter (Group) Co.,Ltd.		Testing Environment :			
PO#VEC-021/20&VEC-022/20		Meter Size :DN150(150mm)		Flowrate(m3/h) :250/5/3.125	
Serial No : 20 000101~120 20 000166		Meter Type : Woltman Water Meter		Pressure(MPa) : 1.6MPA	
Customer : VECTRUM SPA		Meter Class : R80		Temperature(C) : 18	
Type Of Test : Q3 Q2 Q1		Meter Model : WPH-SDC DN150 PN16 R80		Printed Date :	
Tested By: Ma/Zhang/Wu		Testing Date : Sep.2020			

Serial No.	Pressure Test	Q3	Q2	Q1	Remark
	Pass	Error (%)	Error (%)	Error (%)	
VEC-021/20					
20 000101	Pass	-1.1	+1.7	+4	OK
20 000102	Pass	-1.2	+0.8	+3.5	OK
20 000103	Pass	-1.5	+0.7	+4	OK
20 000104	Pass	-1.3	+0.5	+4	OK
20 000105	Pass	-1.2	+0.8	+4	OK
20 000106	Pass	-1.5	+0.7	+3.5	OK
20 000107	Pass	-1.3	+1	+2.5	OK
20 000108	Pass	-1.3	+1	+3.5	OK
20 000109	Pass	-1.4	+0.7	+3.5	OK
20 000110	Pass	-1.4	+1	+3	OK
20 000111	Pass	-1.4	+0.6	+4	OK
20 000112	Pass	-1.1	+0.7	+3.5	OK
20 000113	Pass	-1.3	+1.5	+3.5	OK
20 000114	Pass	-1.4	+0.8	+3	OK
20 000115	Pass	-0.8	+1.5	+4	OK
20 000116	Pass	-0.8	+1.7	+4	OK
20 000117	Pass	-1.4	+0.7	+3	OK
20 000118	Pass	-1.2	+0.5	+3.5	OK
20 000119	Pass	-1.3	+1	+4	OK
20 000120	Pass	-1	+0.6	+2	OK
VEC-022/20					OK
20 000166	Pass	-1.5	+1	+3.5	OK

CALIBRATION CERTIFICATE

Testing Location : Ningbo Water Meter (Group) Co.,Ltd.		Testing Environment :			
PO#VEC-021/20&VEC-022/20		Meter Size :DN200(200mm)		Flowrate(m3/h) :400/8/5	
Serial No : 20 000121~150 20 000167		Meter Type : Woltman Water Meter		Pressure(MPa) : 1.6MPA	
Customer : VECTRUM SPA		Meter Class : R80		Temperature(C) : 18	
Type Of Test : Q3 Q2 Q1		Meter Model : WPH-SDC DN200 PN16 R80		Printed Date :	
Tested By: Ma/Zhang/Wu		Testing Date : Sep.2020			

Serial No.	Pressure Test	Q3	Q2	Q1	Remark
	Pass	Error (%)	Error (%)	Error (%)	
VEC-021/20					
20 000121	Pass	-1.5	+0.4	-4	OK
20 000122	Pass	-1	+1.5	-3	OK
20 000123	Pass	-1.2	+1.5	-4	OK

20 000124	Pass	-1.2	+1.3	-2	OK
20 000125	Pass	-1.2	+0.8	-4.5	OK
20 000126	Pass	-1.3	+0.7	-3.5	OK
20 000127	Pass	-1	+1	-2	OK
20 000128	Pass	-1.4	+1	-4	OK
20 000129	Pass	-0.7	-1.2	+3	OK
20 000130	Pass	0	-0.4	-2.5	OK
20 000131	Pass	0	-1.5	-2.5	OK
20 000132	Pass	-0.8	-1.2	-2.5	OK
20 000133	Pass	-1.5	+0.8	-3.5	OK
20 000134	Pass	-1.3	+1.5	-2	OK
20 000135	Pass	-0.7	+1.5	-3.5	OK
20 000136	Pass	-1	+1.4	-3	OK
20 000137	Pass	-1.2	+1.3	-2.5	OK
20 000138	Pass	-1	+1.2	-4.5	OK
20 000139	Pass	-1.2	+1.3	-2	OK
20 000140	Pass	-1.3	+1	-3	OK
20 000141	Pass	-0.8	+1.7	-2	OK
20 000142	Pass	-1.5	+1.3	-3	OK
20 000143	Pass	-1.4	+1.8	-3	OK
20 000144	Pass	-1.3	+1.5	-0.8	OK
20 000145	Pass	-0.8	+1.5	-3	OK
20 000146	Pass	-1	+1.3	-3	OK
20 000147	Pass	-1.2	+1.5	-4	OK
20 000148	Pass	-0.8	+1.5	-2	OK
20 000149	Pass	-1.2	+1.5	-4	OK
20 000150	Pass	-1	+1.7	-3	OK
VEC-022/20					
20 000167	Pass	-1.5	+1.7	-3	OK

CALIBRATION CERTIFICATE

Testing Location : Ningbo Water Meter (Group) Co.,Ltd.		Testing Environment :			
PO#VEC-021/20		Meter Size :DN250(250mm)	Flowrate(m3/h) :630/12.6/7.875		
Serial No : 20 000151		Meter Type : Woltman Water Meter	Pressure(MPa) : 1.6MPA		
Customer : VECTRUM SPA		Meter Class : R80	Temperature(C) : 18		
Type Of Test : Q3 Q2 Q1		Meter Model : WP-SDC Dn250 PN16 R80	Printed Date :		
Tested By: Ma/Zhang/Wu		Testing Date : Sep.2020			
Serial No.	Pressure Test	Q3	Q2	Q1	Remark
	Pass	Error (%)	Error (%)	Error (%)	
VEC-021/20					
20 000151	Pass	-0.50	0.70	-1.00	OK

CALIBRATION CERTIFICATE

Testing Location : Ningbo Water Meter (Group) Co.,Ltd.		Testing Environment :			
PO#VEC-021/20		Meter Size :DN300(300mm)	Flowrate(m3/h) :1000/20/12.5		
Serial No : 20 000152		Meter Type : Woltman Water Meter	Pressure(MPa) : 1.6MPA		
Customer : VECTRUM SPA		Meter Class : R80	Temperature(C) : 18		
Type Of Test : Q3 Q2 Q1		Meter Model : WP-SDC Dn300 PN16 R80	Printed Date :		
Tested By: Ma/Zhang/Wu		Testing Date : Sep.2020			
Serial No.	Pressure Test	Q3	Q2	Q1	Remark
	Pass	Error (%)	Error (%)	Error (%)	
VEC-021/20					
20 000152	Pass	-0.60	1.00	-2.10	OK

NWM states that it has a laboratory being accredited in accordance with ISO/IEC 17025:2017

宁波水表(集团)股份有限公司
 NINGBO WATER METER (GROUP) CO., LTD.



China National Accreditation Service for Conformity Assessment
LABORATORY ACCREDITATION CERTIFICATE
(Registration No. CNAS L6422)

Central Laboratory of Ningbo Water Meter Co., Ltd.

(Legal Entity: Ningbo Water Meter Co., Ltd.)

No.181, Haichuan Road, Jiangbei District, Ningbo, Zhejiang, China

is accredited in accordance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence to undertake the service described in the schedule attached to this certificate.

The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule forms an integral part of this certificate.

Effective Date: 2018-12-24

Expiry Date: 2024-12-23

Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment(CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is a signatory of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA) and the Asia Pacific Laboratory Accreditation Cooperation Mutual Recognition Arrangement (APLAC MRA). The validity of the certificate can be checked on CNAS website at <http://www.cnas.org.cn/english/forlicensees/certifiedbody/index.shtml>