



MPE TEST REPORT

Report No.: SHE23090001-02CE

Date: 2023-09-22

Page 1 of 11

Applicant : Georg Fischer JRG AG
Address of Applicant : Hauptstrasse 130, Sissach, 4450, Switzerland

Product Name : Electrically Operated Water Valve
Brand Name : GF
Model Name : 9910.015, 9910.020, 9910.025, 9920.015, 9920.020
Sample Acquisition Method : Sent by Client
Sample No. : E23090001-02#02

FCC ID : 2ASE5-99001
ISED Number : 24912-99001

Standards : FCC Part 2.1093
RSS-102 (Issue 5, Amd.1-February 2, 2021)

Date of Receipt : 2023-09-04
Date of Test : 2023-09-05~ 2023-09-22
Date of Issue : 2023-09-22

Remark:

This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

Prepared by:

Erik Yang

(Erik Yang)

Reviewed by:

Jennifer Zhou

(Jennifer Zhou)

Approved by:

Echo Mu

(Authorized signatory: Echo Mu)





MPE TEST REPORT

Report No.: SHE23090001-02CE

Date: 2023-09-22

Page 2 of 11

Contents

1	GENERAL INFORMATION	3
1.1	TESTING LABORATORY	3
1.2	DETAILS OF APPLICATION	3
1.3	DETAILS OF EUT	3
2	ASSESSMENT METHODS	4
3	CONCLUSION	5
4	APPENDIXES	6
4.1	SAMPLE PHOTOGRAPH	6



MPE TEST REPORT

Report No.: SHE23090001-02CE

Date: 2023-09-22

Page 3 of 11

1 General Information

1.1 Testing Laboratory

ISED CAB identifier #	CN0081
Company Name	ICAS Testing Technology Services (Shanghai) Co., Ltd.
Address	No.1298, Pingan Road, Minhang District, Shanghai, China
Telephone	0086 21-51682999
Fax	0086 21-54711112
Homepage	www.icasiso.com

1.2 Details of Application

Applicant Company Name	Georg Fischer JRG AG
Address	Hauptstrasse 130, Sissach, 4450, Switzerland
Contact Person	Philippe Cachot
Telephone	+41 61975 2402
Email	philippe-cachot@georgfischer.com
Manufacturer Company Name	Georg Fischer JRG AG
Address	Hauptstrasse 130, Sissach, 4450, Switzerland

1.3 Details of EUT

Product Name	Electrically Operated Water Valve
Brand Name	GF
Test Model Name	9910.015
Series Model Name	9910.020, 9910.025, 9920.015, 9920.020
Difference Description	All models are same in electrical characteristics. The differences between them are type designation and the appearance. So, all the RF tests were performed on model 9910.015.
FCC ID	2ASE5-99001
ISED Number	24912-99001
HVIN	99001
Mode of Operation	Bluetooth BLE
Frequency Range	2402MHz ~ 2480MHz
Modulation Type	BLE <input checked="" type="checkbox"/> GFSK 1Mbps <input checked="" type="checkbox"/> GFSK 2Mbps
Maximum conducted output power	-0.45dBm
E.I.R.P	1.37dBm
Antenna Type	PCB Antenna
Antenna Gain	1.82dBi
Hardware Version	Index D



MPE TEST REPORT

Report No.: SHE23090001-02CE

Date: 2023-09-22

Page 4 of 11

Software Version

V576

2 Assessment methods

For FCC

According to 447498 D01 General RF Exposure Guidance v06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

Where $f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

For IC

According with section 2.5.1 of RSS-102 Issue 5, SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table.

Exemption Limits (mW)

Frequency (MHz)	At separation distance of ≤ 5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤ 300	71mW	101mW	132mW	162mW	193mW
450	5mW	70mW	88mW	106mW	123mW
835	17mW	30mW	42mW	55mW	67mW
1900	7mW	10mW	18mW	34mW	60mW
2450	4mW	7mW	15mW	30mW	52mW
3500	2mW	6mW	16mW	32mW	55mW
5800	1mW	6mW	15mW	27mW	41mW
Frequency (MHz)	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥ 50 mm
≤ 300	223mW	254mW	284mW	315mW	345mW
450	141mW	159mW	177mW	195mW	213mW
835	80mW	92mW	105mW	117mW	130mW
1900	99mW	153mW	225mW	315mW	431mW
2450	83mW	123mW	173mW	235mW	309mW
3500	86mW	124mW	170mW	225mW	290mW
5800	56mW	71mW	85mW	97mW	106mW



MPE TEST REPORT

Report No.: SHE23090001-02CE

Date: 2023-09-22

Page 5 of 11

Tune-up power

Operation Mode	Operation Frequency	Power Range (dBm)
BLE-1Mbps	2402-2480	(-0.50) – (-2.00)
BLE-2Mbps	2402-2480	(-0.40) – (-2.00)

FCC

Operation Mode	Operation Frequency (MHz)	Tune-up Power (dBm)	Tune-up Power (mW)	Separation Distance (mm)	RF exposure evaluation SAR	Exclusion Thresholds
BLE-1Mbps	2402-2480	-0.50	0.89125	5	0.27626	3.0
BLE-2Mbps	2402-2480	-0.40	0.91201	5	0.28269	3.0

3 Conclusion

For FCC: Per KDB 447498 D01v06, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is <3.0, SAR testing is not required. RF exposure Evaluation Results: Compliance

For IC: RSS-102 section 2.5.1 Exemption Limits for Routine Evaluation, Table 1 shows the SAR evaluation for a device with a separation distance of 5 mm at 2450 MHz is 4mW, which is 6.02dBm >1.37dBm, so SAR testing is not required.

MPE TEST REPORT

Report No.: SHE23090001-02CE

Date: 2023-09-22

Page 6 of 11

4 Appendixes

4.1 Sample Photograph



Front of the sample



MPE TEST REPORT

Report No.: SHE23090001-02CE

Date: 2023-09-22

Page 7 of 11

Rear of the sample



Left of the sample



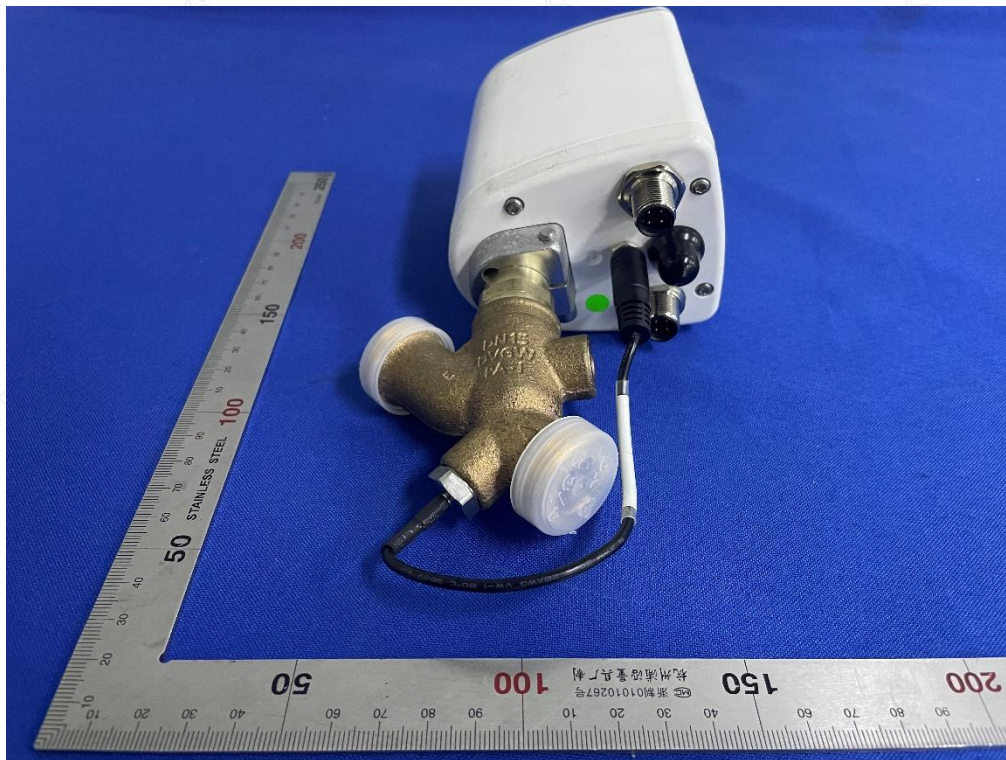
Right of the sample

MPE TEST REPORT

Report No.: SHE23090001-02CE

Date: 2023-09-22

Page 8 of 11



Top of the sample



Bottom of the sample

MPE TEST REPORT

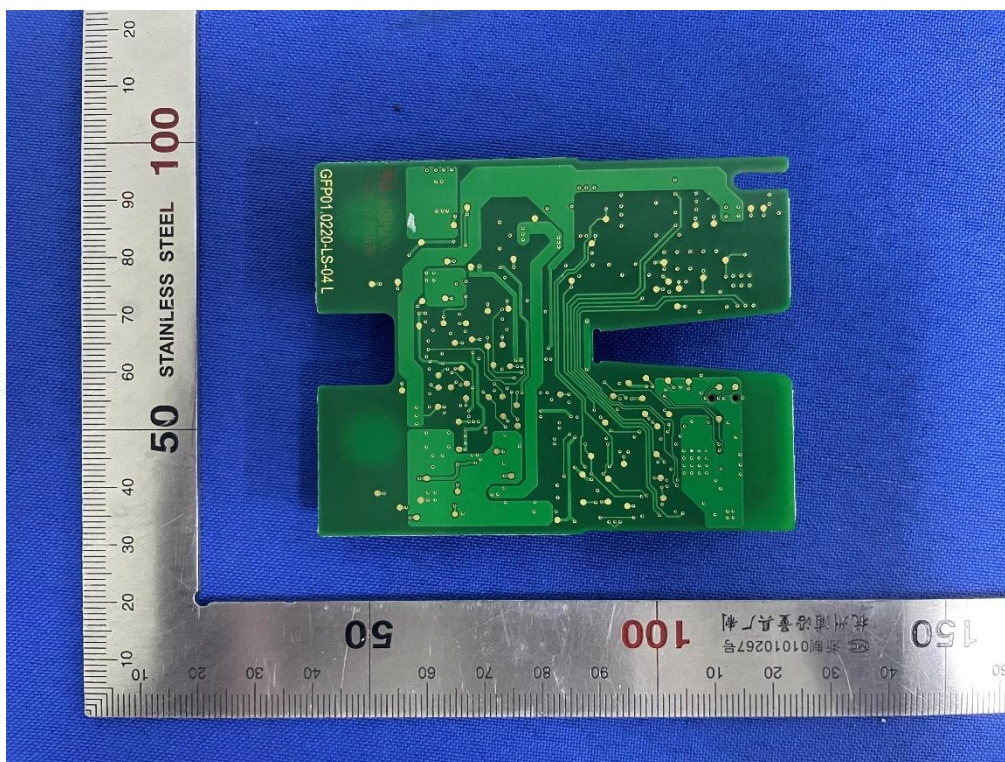
Report No.: SHE23090001-02CE

Date: 2023-09-22

Page 9 of 11



Open of the sample



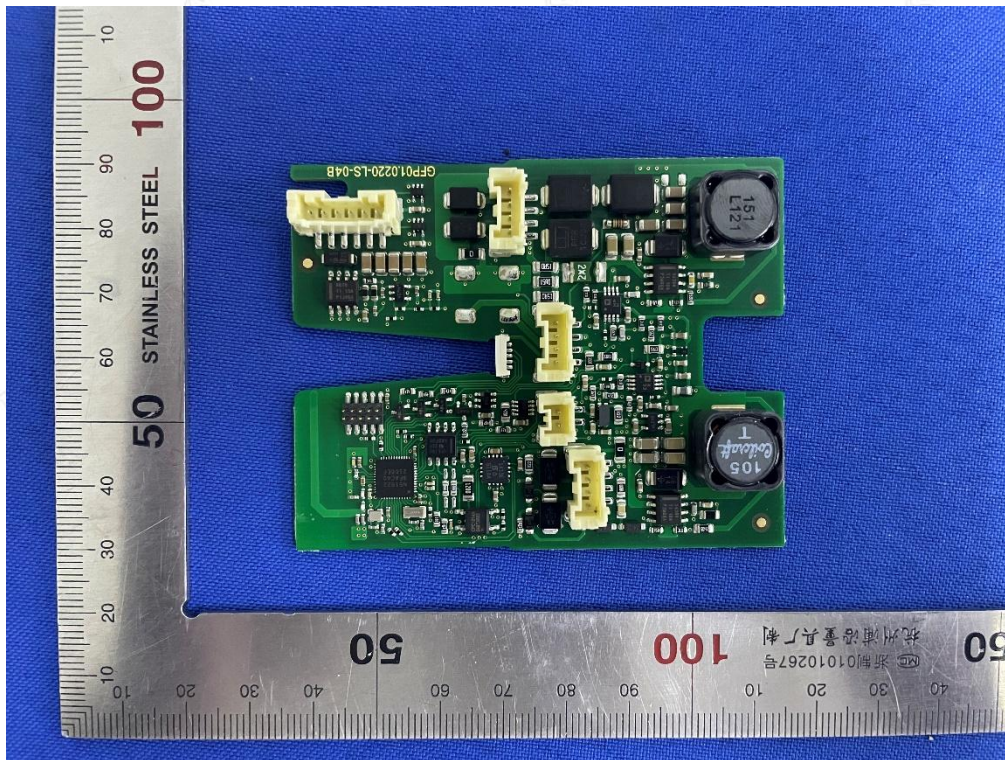
Internal-1 of the sample

MPE TEST REPORT

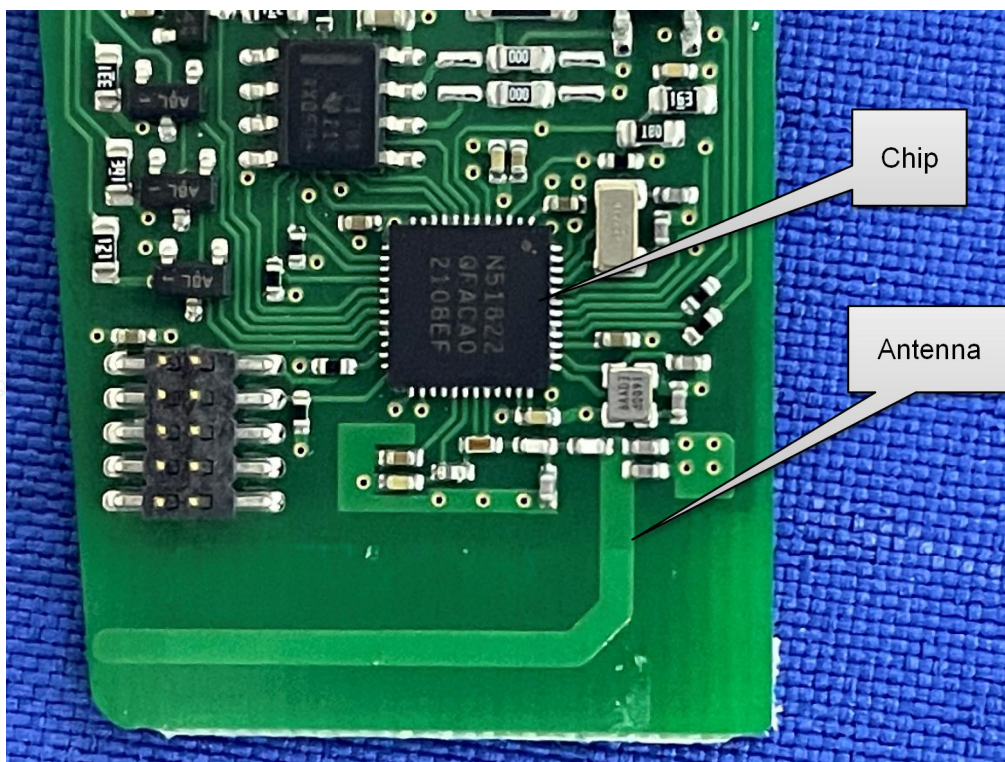
Report No.: SHE23090001-02CE

Date: 2023-09-22

Page 10 of 11



Internal-2 of the sample



Antenna Position of the sample

End of the report

声明 Terms & conditions

1. 英格尔检测技术服务（上海）有限公司（以下简称“本公司”）以保密的方法处理及签发有关报告予客户。在未得本公司的同意下，该报告不得作部分翻制，或作宣传或其它未经本公司许可的用途。当该客户从本公司收到有关报告后，可以展示或传送该报告或由本公司所制定该报告的核证版本予其顾客、供应商或其它直接有关人士。除非被有关政府机构、法律或法庭命令所要求，本公司在未经客户的同意前，将不会与其他方就报告的内容进行任何讨论、书信的往来或透露。
A report will be issued in confidence to the Clients and it will be strictly treated as such by ICAS Testing Technology Service (Shanghai) Co., Ltd. (hereinafter referred to as "ICAS"). It should not be reproduced in part and it should not be used for advertising or other unauthorized purposes without the written consent of ICAS. The Clients to whom the Report is issued, however, show or send it, or a certified copy thereof prepared by ICAS, to his customer, supplier or other persons directly concerned. ICAS will, without the consent of the Clients, neither enter into any discussion or correspondence with nor disclose to any other party concerning the contents of the report unless required by the relevant governmental authorities, laws or court orders.
2. 假若该客户准备利用本公司所签发的报告在司法或仲裁程序上，该客户于呈交样品予本公司作测试前必须明确阐述此用途。
If the client is prepared to use the report issued by ICAS in the judicial or arbitral, the client must specify this use before submitting the sample to ICAS for testing.
3. 除非本公司的确进行抽样测试及于有关报告内阐明此项事实，该报告只适用于已被测试的样品，而不适用于大量额度的有关货品。
Unless ICAS does carry out a sampling test and clarify this fact in the relevant report, the report applies only to the samples that have been tested and do not apply to a large amount of the relevant goods.
4. 假若该客户并未指定该测试所应用的测试方法或标准，本公司将会自行选择适当的方法或标准并在委托协议 / 合同中告知。
If the Clients do not specify the methods / standards to be applied, ICAS will choose the appropriate methods/standards and inform the client in the agreement/contract.
5. 本公司对由于利用本公司所签发的任何报告或通讯内的资料而造成的损失，概不会承担任何责任。
ICAS will not be liable or accept responsibility for any loss or damage arising from the use of in the reports issued by ICAS or communication information.
6. 假若该报告被不适当地运用，本公司将会保留权利撤回该报告，及采取任何适当的措施。
If the report is inappropriately used, ICAS will reserve the right to withdraw the report and take any appropriate action.
7. 该客户同意其委托本公司进行测试所得出之报告，并不能作为针对本公司法律行动的依据。
Samples submitted for testing are accepted on the understanding that the report issued cannot form the basis of, or be the instrument for, legal action against ICAS.
8. 假若该客户的要求令致有关该样品的测试须于该客户或任何第三方的实验室进行，则本公司只会代为传送有关该测试的结果，对其准确性概不负任何责任。如本公司只可证明该客户或任何第三方的实验室已进行有关测试，则本公司只可确认某正确的样品已经被测试，而毋须为该测试的准确性负任何责任。
If the Clients require the analysis of samples by the Client's or any third party's laboratory, ICAS will only convey the result of the analysis without responsibility for its accuracy. If ICAS is only able to witness an analysis by the Client's or any third party's laboratory ICAS will only confirm that the correct sample has been analyzed without responsibility for the accuracy of any analysis or results.
9. 本公司在提供测试服务期间所衍生的任何报告、证书或其它物资，其相关的所有法律产权（包括知识产权），皆由本公司所拥有。
Any legal property right (include intellectual property) in respect of any report, certificate or other materials derived from ICAS during the provision of the testing service are owned by ICAS.
10. 当本公司收到该客户的请求，本公司可以电子媒介传递有关测试服务的结果，但该客户应注意，电子媒介传递不能保证其所含资料不会流失、延缓或被其他方截取。对于电子媒介传递导致其所含的任何资料出现泄露、差误或遗漏，本公司将不会负任何责任。
When ICAS receives the request from the Client, ICAS transmit the results of the test service in electronic media, but the Client should note that the Electronic Media Delivery does not guarantee that the information contained therein will not be lost, delayed or intercepted by third party. ICAS is not liable for any disclosure, error or omission in the content of such messages as a result of electronic transmission.
11. 本公司对其可控范围之外发生的样品质量或其它特征的变化不承担责任。本报告不具有对测试项目或样品推荐或认可的作用。
ICAS assumes no responsibility for variations in quality or other characteristics of items submitted under conditions over which ICAS has no control. This Report does not constitute a recommendation for, or endorsement of, the item or material tested.
12. 本公司经与客户协商一致出具纸质版或电子版形式的报告；报告涂改无效；无授权签字人签字无效；纸质版报告未加盖本公司“检验检测专用章”或“报告专用章”和骑缝章无效；电子版报告未加盖本公司“检验检测专用章”或“报告专用章”无效。
The company issues the report in paper or electronic form through consultation with the customer. The report is invalid if altered or without authorized signatory; The paper version of the report is invalid without the company's "special seal for inspection and testing" or "special seal for report" and the cross seal; The electronic version of the report is invalid without the company's "special seal for inspection and testing" or "special seal for report".
13. 对报告若有异议，有法律法规规定的，依照法律法规执行。其它委托类型报告应于收到报告之日起十五日内向本公司提出，逾期不予受理。
Any objection to the report should execute according to laws and regulations if exist, other entrusted report should be submitted to ICAS within 15 days from the date of receiving the report, and overdue will not be handled.
14. 样品及样品信息由客户提供及确认。本公司不负责证实样品的真伪性，不承担证实客户提供信息的准确性、适当性和（或）完整性责任。
The sample(s) and sample information should be provided and confirmed by the Client. ICAS is not responsible for verifying the authenticity of the sample and does not assume responsibility for the accuracy, appropriateness and/or completeness of the information provided by the Client.
15. 不包含 CMA 资质认定标志的报告，检测数据和结果不具有对社会的证明作用，仅供科研、教学、内部质量控制之用。中英文报告内容以中文为准。
The date and results shown in the report without CMA logo are not used as proof for society, only used for reference in study, teaching and internal quality control. The Chinese version of the report written in Chinese and English shall prevail.

备注：1. 报告中带“*”代表暂未在 CNAS 范围内，“§”代表暂未在本公司 CMA 资质认定许可技术能力。

Note: “*in the report indicates that it is not included in the scope of CNAS, “§” indicates that it is not included in the CMA scope of ICAS.

2. “#”号代表数据来源于指定的签约实验室

“#” indicated that data comes from designated contracted lab:

CMA 资质认定证书编号 CMA Certificate No:

CNAS 注册号 CNAS Registration No:

ICAS英格尔检测中心 ICAS Testing Center
Tel:0086 21-51682918 E-mail:info@icas.org.cn
Add:上海市闵行区瓶北路155号/瓶安路1298号/徐汇区中山西路2368号18F
155 Pingbai Rd / 1298 Pingan Rd, Minhang District, Shanghai/18F,2368W.Zhongshan Rd,Xuhui District.

ICAS英格尔认证中心 ICAS Certification Center
Tel:0086 21-51114700 E-mail:info@icas.org.cn
Add:上海市徐汇区中山西路2368号华鼎大厦31F/25F
31/25F Huading Tower , 2368W.Zhongshan Rd,Xuhui District,Shanghai

ICAS全国各分支机构 温州 / 广州 / 深圳 / 福州 / 厦门 / 昆明 / 南宁 / 长沙 / 重庆 / 成都 / 南京 / 合肥 / 青岛 / 郑州 / 济南 / 江西 / 天津
ICAS National Branch Offices Wenzhou/Guangzhou/Shenzhen/Fuzhou/Xiamen/Kunming/Nanning/Changsha/Chongqing/Chengdu/Nanjing/Hefei/Qingdao/Zhengzhou/Jinan/Jiangxi/Tianjin