C E R T I F I C A T E
of Conformity

TÜVRheinland®

Registration No.: AK 60142358 0001

Report No.: 50283025 001

Holder:
Ningbo Firm Tools Co., Ltd.
No.99, Linjiang Road, Yinzhou Binhai
Investment and Business Incubation,
315123 Ningbo, Zhejiang
China

Product:
Other Gas appliance
Gas powered tool - Air aspirated hand blowpipes

Identification:

Gas type:	Models:
Butane	PQ8935
Propane	916231 , 868681 , 456996 , PQ830 , PQ002 , PQ004 , PQ009 , 427639 , PQ841 , PQ837
MAPP	997400
Butane-Propane mix	PQ810 , PQ820 , 93639

Tested acc. to:
EN ISO 9012:2011
EN 521:2019+AC

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Certification Body

TÜVRheinland LGA Products GmbH Zertifizierungsstelle

Date 27.08.2019

Emanuele Ferrari

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

中国认可
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CNAS L0220

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Test Report

Report Number	160308025GZU-001	Original Issued:	15/Apr/2016	Revised:	None
Directive	2009/142/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL 30 November 2009 relating to appliances burning gaseous fuels				
Standard(s)	Examination of the appliances to the requirements and test methods of BS EN 521:2006 to demonstrate the products suitability as Vapor pressure Butane - Propane mixture and vapor pressure - Propane appliances.				

Applicant	NINGBO FIRM TOOLS CO.,LTD	Manufacturer	NINGBO FIRM TOOLS CO.,LTD
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Total 14 pages

Signatures

A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated.

Completed by:	Kevin Yi	Reviewed:	Steve Zhu
Title:	Team Leader	Title:	Local Decision Marker of GAD (Notified Body 0359)
Signature:		Signature:	

In order to demonstrate full compliance with the GAD (affix the CE Mark), an EC Surveillance Certificate (EC Declaration of Conformity to Type) is required. For surveillance assessment, details of information required to be provided by the licence holder/manufacturer are listed on the last page of this test report.

REVISION SUMMARY

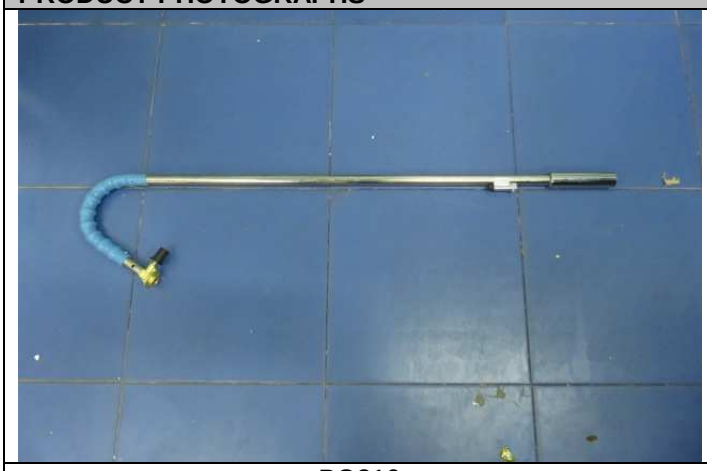
DD/Month/YYYY	Project Engineer / Reviewer	Page #	Project No	Reason for revision
				First issue

DESCRIPTION OF APPLIANCE	
Product	THERMOFLAMMbio CLASSIC PQ810 THERMOFLAMMbio COMFORT PQ820 THERMOFLAMMBIO PROFESSIONAL PQ830
Brand name	NA
Description	The products covered by this report is outdoor use weed burner, it's used for weeding only.
Models	PQ810, PQ820, PQ830
Model Similarity	PQ810 & PQ820 are gas tools with injector 0.35 mm, and an igniter was fitted with the appliance. It's directly connected to the gas cartridge. And it's use with vapor pressure butane and propane mixture gas cartridge (not provide). The appliances fit with ignition pin nearby the flame burner. PQ830 is a gas tool which connected to the gas cylinder via a 5 m length of hose assembly, and a reguatlor (not provide) with out pressure at 4Bar shall be fitted. It's used with refilled Propane gas container (not provide). The appliance can be ignited at gas rate of 8.35 kW and maintain at this position, then by presse the control handle to adjust the gas rate to 40 kW(2,856 g/h).
Category	Countries
Vapour pressure butane-propane mixture	For use in all European Countries .Only to be used with original GRODENBERG gas cartridge(70% butane / 30 propane, Model CGV330L) complying to EN417. For model PQ810 & PQ820
Vapour pressure propane	For use in all European Countries . Only to be used with Propane gas cylinder of sizes 5kg, 11kg or 33kg. For model PQ830.

TECHNICAL DATA	Model:	PQ810, PQ820
Category	Vapor pressure – Butane and Propane mixture	
Declared heat input	5.5 kW(393 g/h)	
Inlet pressure	Direct pressure - Butane and Propane mixture	
Burner type	Tube burner	
No. of injectors	1	
Injector size	0.35 mm	
Inlet connection	To suit with gas cartridge.	

TECHNICAL DATA	Model:	PQ830
Category	Vapor pressure - Propane	
Declared heat input	40 kW(2856 g/h), Maintain rate (ignition) 8.5 kW.	
Inlet pressure	Direct pressure - Propane	
Burner type	Tube burner	
No. of injectors	1	
Injector size	1.2 mm	
Inlet connection	To suit national situation in country of destination	

CRITICAL CONTROLS FITTED TO THE APPLIANCE				
Component Name	Manufacturer / Trademark	Type / Model	Technical data	EC Type Examination Certificate No and other Report No
Hose For PQ830	Walter werkzeuge Salzburg gmbh	5mm	2MPa(20bar) working pressure	Intertek report : 150521130GZU-001

PRODUCT PHOTOGRAPHS	
	
PQ810	PQ820
	NONE
PQ830	NONE

Findings of examination to BS EN 521: 2006 Specification for dedicated liquefied petroleum gas appliances – Portable vapour pressure liquefied petroleum gas appliances.

Clause	Comments and results	Conclusion
5	Safety requirements	
5.1	General	
	The appliance test methods and means of verification were tested according to those indicated in Clause 6.	Complies
5.2	Conversion to different gases	
	PQ810/PQ820 is a one category appliance vapor pressure butane and propane mixture, PQ830 is a one category appliance vapor pressure propane, and hence does not require conversion to other appliance categories.	Not applicable
5.3	Materials	
	The appliance does not use a non-metallic material in the burner.	Not applicable
	The quality and thickness of materials used in the construction of the appliance was such that the construction and performance characteristics were not altered during use. Parts of the appliance which were required to withstand mechanical, chemical and thermal actions during use did not deteriorate. In normal conditions of operation, of cleaning or adjustment the appliance were not liable to any alterations that would impair its performance.	Complies Complies Complies
	Sheet metal parts of the appliance not made of corrosion resistant materials were effectively protected against corrosion.	Complies
	Seals and jointing compounds were found to have characteristics suited to their use.	Complies
	Rubber based materials complied with the requirements of EN 549: 1995	Complies (1)
	Copper tube was not used in the appliance.	Not applicable
	Asbestos or asbestos based materials are not used in the construction of the appliance.	Complies
	The appliance does not have any finish of materials that come into direct contact with food.	Not applicable
	The tap unit has not use zinc alloy for part of is component parts.	Complies
	With the exception of seals parts of the appliance in contact with gas are not made of plastics.	Complies
5.4	Assembly, cleaning and maintenance	
5.4.1	Assembly	
	The entire appliance gas circuit, including the injector is assembled by the manufacturer.	Complies
	No user assembled parts.	Not applicable
	It is not possible to dismantle parts adjusted at the factory. Parts was able to assembled correctly by following the instruction given in the instruction. All screws are protected against tampering.	Complies Complies Complies
	Pressure reducing device is not provided with the appliances. Note: The PQ830 should be used with regulator at the cylinder outlet via a 5 m lenghth of hose assembly, the outlet pressure of pressure is at 4 bar.	Not applicable
	The appliance gas circuit does not incorporate a reservoir between the appliance gas inlet connection and the valve, intended to receive part of the gas in the liquid phase or contained in the supply vessel during connection.	Not applicable
5.4.2	Cleaning and maintenance	
	All parts of the appliance requiring frequent cleaning by the user are easily accessible. And the user would not possible to put these parts back incorrectly.	Complies
	The appliance has no sharp edges on the accessible parts of the appliance which could cause injury during use and cleaning.	Complies
5.5	Strength and stability	
5.5.1	Strength	
5.5.1.1	General	

Clause	Comments and results	Conclusion
	The construction of the appliance was such that during normal use:	
	No Displacement of parts	Complies
	No Distortion	Complies
	No Deterioration	Complies
5.5.1.2	It's not a hotplate.	Not applicable
5.5.1.3	The appliance does not have any glass components.	Not applicable
5.5.2	Stability	
	It's a hand held tool, and would be placed on ground	Not applicable
5.6	Soundness of the gas circuit assembly	
	Holes for screws, pins etc., intended for assembly of components did not open into the space reserved for gas ways leading to the injector.	Complies
	The soundness of parts and assemblies connected to the gas circuit are assured by means of metal to metal seals or joints with seals. It excludes the use of thread sealing compounds.	Complies Complies
	The appliance does not have any removable components of the gas pipework which may be dismantled during maintenance.	Not applicable
	Soft solder is not used in the construction of this appliance. Conformity was verified based on the manufacturer's specification.	Not applicable Complies
	When tested under the conditions of Clause 6.6.1 during tests 1 and 2 the appliance did not leak at a rate exceeding 0.07 l/h. The tests were carried out both before and after the test programme.	Complies
5.7	Connections	
5.7.1	General	
	Connection of the gas cylinder into the appliance was found to be easily achieved following the instruction literature supplied. This was achieved with only minimal leakage. The appliance connection is detailed on the instruction manual.	Complies Complies Complies
5.7.2	Appliances directly fitted to the gas container	
5.7.2.1	Appliances not fitted to piercable cartridges	Not applicable
5.7.2.2	Appliances fixed onto cartridges with a female valve and threaded centre boss as defined in EN 417 (For model PQ810 & PQ820)	
5.7.2.2.1	The appliance is designed to be fitted to this type of cartridge valve.	Complies
	Major diameter: 10.96 mm minimum	Complies
	Effective diameter: 10.66 mm – 10.75 mm	Complies
	Minor diameter: 10.20 mm – 10.27 mm	Complies
5.7.2.2.2	The part of the adaptor ,with a full threa, shall be 3.10mm±0.1mm long	Complies
5.7.2.2.3	The thread shall penetrate fully into the seal groove without reduction in form	Complies
5.7.2.2.4	A valve actuator shall be fixed on the axis of the adaptor in such a way that it allows the drawing off of gas from a full cartridge . the valve actuator shall allow the release of gas from the cartridge when the appliance is screwed onto the valve with a minimum torqueof 3NM.	Complies
5.7.2.2.5	The diameter of the valve actuator shall not exceed 2.20mm if it is solid and shall be between 3.10mm and 3.15mm if it includes a gas way . the valve actuator shall be concentric with the "7/16 in – 28 unified form thread" subject to a tolerance of 0.15mm. (M11 X1)	Complies
5.7.2.2.6	At the point where the valve actuator comes into contact with the valve seat, the valve actuator diameter shall be at least 1.70mm	Complies
5.7.2.2.7	A seal groove shall be machined at the bottom of the threaded part so as to centre and secure a seal. This seal shall come into contact with the valve centre boss. The seal and the seal groove shall be such that thr=ere is no visible and permanent distortion of the threaded centre boss when the appliance is screwed onto the valve with a torque of 12 Nm.	Complies

Clause	Comments and results	Conclusion
5.7.2.2.8	The length of the valve actuator shall be such that it doed not penetrate into the valve for a distance exceeding 4.15 mm below the plane of the upper side of the centre boss when the appliance os screwed onto the valve with a torque of 12 Nm.	Complies
5.7.2.2.9	The inlet of the adaptor prior to the thread shall be a maximum of 2.00 mm deep and have a diameter of between 11.0mm and 12.0mm. in addition, the inlet of the adaptor shall begin with a 1.0mm x45º chamfer	Complies
5.7.2.2.10	The diameter of the adaptor which penetrates the valve seal groove shall not exceed 22.90mm. this part shall not extend more than 3.5mm from the start of the adaptor thread.	Complies
5.7.2.2.11	The diameter of the adaptor not beyond the 3.5mm distance.	Complies
5.7.2.2.12	The requirements of 5.7.2.2 shall be verified under the test conditions given in 6.7.2.2.	Complies
5.7.3	Appliances connected to the gas container by a flexible hose. Note: only applicable to PQ830.	
	For PQ830: The hose was supplied with the flexible hose fitted. For PQ810 and PQ810: not supply with hose assembly.	Complies Not applicable
	Clip was not used	Not applicable
	The hose could move freely without risk of coming into contact with part exceed 70K during temperature test.	Complies
	After the load ot the hose, no leakage greater than 0.07l/h	Complies
5.8	Transport, fixing and mobility devices	
	The appliance could be transport by hand held without gas container.	Complies
	The appliance does not have any fixing devices.	Not applicable
	The appliance does not have any mobility devices.	Not applicable
5.9	Taps	
5.9.1	General	
	Each burner shall be controlled by a tap or device allowing the opening and closing of its supply. For appliances incorporating only one burner, this closing device may be that of the gas container	Complies
	Taps shall incorporate two stops, one on the closed position and one at the end of travel	Complies
	Taps shall be so placed in such a way that their strength, their operation, their manipulation and their accessibility undergo no change from actions to which they are subjected in normal use.	Complies
	Taps shall be mounted in such a way that no accidental movement relative to fixed gas supply pipework is possible.	Complies
5.9.2	It is not possible to unscrew the needle valve from its housing when opening the valve. When closing the gas supply its seat constitutes the stop.	Complies Complies
	The needle valve complied with the requirements of Annex B when tested.	Complies
5.10	Control handles	
5.10.1	Construction	
	The appliance has only one burner so it is obvious which control knob operates which burner.	Complies
	The appliance has only one burner so it is obvious which control knob operates which burner. The cartridge locking device does not cause movement of the main control knob.	Complies
	The control knob is so designed so that it cannot be fitted in the incorrect position nor move by itself.	Complies
	The closing direction of the tap is clockwise.	Complies
5.10.2	Marking	
5.10.2.1	Taps with marked positions. (For example plug type taps).	
	The tap is not a tap with marked positions.	Not applicable
5.10.2.2	Taps with variable positions. (For example needle valves).	
	The markings on the control handle is a flame symbol which points towards the related positions marked on the fascia panel of the appliance.	Complies
	a) The closing direction is marked with a stylised series of	Complies

Clause	Comments and results	Conclusion
	rectangular shapes decreasing in size towards the 'OFF' position.	
	b) The appliance does not have a reduced rate position.	Complies
	c) The meanings of the symbols are noted in the instruction literature.	Complies
5.11	Injectors	
	The gas rate is controlled by a calibrated injector.	Complies
	The Injector was not removable	Complies
5.12	Ignition devices	
	The ignition device is designed and constructed so that it provides rapid and safe ignition. The components of the ignition device are so designed to avoid damage and displacement during use. The relative positions of the components of the ignition device and burner are well defined to ensure safe operation of the assembly.	Complies Complies Complies
5.13	Flame supervision devices was not fitte with the appliance	Not applicable
5.14	Burners and radiant elements	
	The burner was designed in such a way that it could not move inadvertently during use or movement of the appliance.	Complies
	Parts of the burner was easy removed for cleaning.	Complies
	Parts of the burner could not be reassembled incorrectly.	Complies
	It is possible for the user to ensure the burner is alight.	Complies
	The burner has no crosslighting devices.	Not applicable
	Under the conditions of test defined in Clause 6.6.3 no leakage in a flammable quantity at the joints of the assembly was evident.	Complies
5.15	The appliance does not have any grids.	Not applicable
5.16	The appliance does not have a turnspit.	Not applicable
5.17	The appliance is not a heating appliance	Not applicable
5.18	Locations and compartments for refillable gas containers. Note: only applicable for PQ830.	
5.18.1	Compartments for refillable gas containers	
	For PQ810 and pq830: The appliance used with a disposable cartridge. For PQ830: the appliance used with refillable gas container but without compartment for the container.	Not applicable Not applicable
5.18.2	Locations for a refillable gas container	
	For PQ810 and pq830: The appliance used with a disposable cartridge. For PQ830: the appliance used with refillable gas container but without compartment for the container. The container located on the floor directly.	Not applicable Not applicable
5.19	Verification of heat input.	
	Under the conditions of test of Clause 6.19 the burner was capable of giving the nominal heat input stated by the manufacturer. The heat input was within the tolerance stated in Figure 5.	Complies Complies
5.20	Resistance to overheating	
	When the burner was tested under the conditions of Clause 6.20, no deterioration of the burner that could impair the safety of the appliance was evident after the test described.	Complies
5.21	Temperature of various parts of the appliance	
5.21.1	Floor standing appliances	
	The appliance was designed to be held during use	Not applicable
5.21.2	Tools designed to be held during use	
	This is a handles held outdoor use weeding tools.	Complies
5.22	Temperature of panels (Floor, walls or ceilings)	
5.22.1	Floor standing appliances	
	The temperature of panels was not exceed the ambient temperature by more than 70K for floors and 50K for walls	Complies
5.22.2	Appliances intended for suspension	
	The surface temperature of various parts was not exceed the limit, refer to the test data	Complies
	Handle temperatue rise not exceed 25K	Complies

Clause	Comments and results	Conclusion
5.23	Ignition, crosslighting and flame stability Note: additional ignition test at -2℃ was conducted per the manual and it's found meet the requirement.	
	When tested to the conditions of Clause 6.23 the appliance was found to meet the following requirements:	Complies
	Ignition, crosslighting and re-ignition occurred smoothly within 5 seconds.	Complies
	60 seconds after ignition, flames were stable and did not lift at maximum test pressure.	Complies
	No extinction or lightback occurred.	Complies
	Only one burner in a same enclosure	Not applicable
5.24	Resistance to draught	
	When tested to Clause 6.24 the burner did not extinguish.	Complies
5.25	Resistance to liquid spillage	
	The burner was not extinguished under the conditions defined in 6.25.	Complies
5.26	Combustion	
	When tested to Clause 6.26 the quantity of CO in air and water vapour free products of combustion did not exceed 0.2%.	Complies
5.27	Accumulation of unburnt gas	
	No accumulation of unburnt built up in the appliance during use. The openings in the base of the appliance allowed the gas to ventilate from the compartment.	Complies Complies
	The openings were not obstructed when the appliance was in position in normal use.	Complies
5.28	Safety at high temperature	Complies
	When tested to Clause 6.28 the pressure inside the gas cartridge did not exceed the pressure of the cartridge contained at 50˚C after test. No deterioration which could impair the safe operation of the appliance was noted. The appliance met the requirements of Clause 5.6 during this test.	Complies Complies Complies
	The ease of changing the gas container and of manipulating the controls did not change. However if a pressure of 6.0 bar was exceeded the pressure relief device operated and required resetting before the appliance could be re-lit.	Complies
5.29	Sooting	
	At the end of the test programme the appliance did not have any soot deposit likely to impair the safe operation of the stove. During the test programme condensation did not create a phenomenon likely to impair the safe operation of the appliance.	Complies Complies
5.30	Rational use of energy	
5.30.1	It's not a hotplate	Not applicable
6	Test methods	
7	Marking	
7.1	Appliance marking	
	The appliance shall carry the following information in a visible and durable fashion, in the official language of the country of destination.	
	a) The name of the manufacturer or his identifying symbol:	Complies
	b) The appliance name:	Complies
	c) The type of gas:	Complies
	d) The appliance category:	Complies
	e) The brand name of the gas container intend to be used with the appliance:	Complies
	f) The text: 'Outdoor use only'.	Complies
	g) The text: Read the instructions before using the appliance.	Complies
	h) The text: CAUTION accessible parts may be very hot. Keep young children away from the appliance.	Not applicable
	i) The appliances designed for use with pieceable cartridges, diagrams showing the correct sequence for fitting of the cartridge	Not applicable
	The information was given on durable labels fixed to the	Complies

Clause	Comments and results	Conclusion
	appliance.	
7.2	Packaging marking	
	The appliance packaging carries the information of Clause 7.1 c) to g) in the official language of the country of destination.	Complies
8	Instructions for use, maintenance and assembly	
	The instructions for use, maintenance and assembly intended for the user are supplied with each appliance and give all the necessary information to use the appliance safely and sensibly. It also includes information that the manufacturer thinks useful. The instructions use drawings to show certain points. The instructions give at least the following information. This will be printed in the language of the country of destination and are legible.	Complies
8.1	The warning: Read these instructions for use carefully so as to familiarise yourself with the appliance before connecting it to its gas container. Keep these instructions for future reference	Complies
8.2	An introduction containing the following information	
	a) The name of the manufacturer (or distributor) and his identifying symbol.	Complies
	b) The appliance name.	Complies
	c) The type of gas, the appliance category and type of gas container to be used stating.	Complies
	d) The injector size.	Complies
	e) The nominal heat input.	Complies
	f) The statement 'outdoor use only'.	Complies
8.3	The following safety information	
	a) The statement: 'Check that the seals (between the appliance and the gas container) are in place and in good condition before connecting to the gas container'.	Complies
	b) A drawing showing the position of these seals.	Complies
	c) The statements: 'Do not use the appliance if it has damaged or worn seals'. 'Do not use the appliance which is leaking, damaged or which does not operate properly'.	Complies Complies
	d) for outdoor use only	Not applicable
	e) it's a hand held tool	Not applicable
	f) The statement that the appliance must be used away from flammable materials and information on the minimum distance from adjacent surfaces.	Complies
	g) The statement that the gas container must be changed in a well ventilated location, preferably outside, away form any sources of ignition, such as naked flames, pilots, electric fires and away from other people.	Complies
	h) The statement that 'If there is a leak on your appliance (smell of gas) take it outside immediately into a well ventilated flame free location where the leak may be detected and stopped. If you wish to check for leaks on your appliance do it outside. Do not try to detect leaks using a flame, use soapy water'.	Complies
8.4	The following information for use	
	a) Advice on how to use the appliance when it is hot.	Complies
	b) Advice on how to store the appliance when it is not in use	Complies
8.5	The following information for assembly	
	a) The appliance assembly instructions are precisely described with regard to the assembly of the pan support onto the top of the burner compartment.	Complies
	b) The correct way of connecting the appliance to the gas container.	Complies
	c) How to check that the appliance is connected to the gas container in a sound fashion.	Complies
	d) How to detect leaks	Complies
	e) The appliance does not have any stability devices.	Not applicable
8.6	The following information for use	
	a) How to light the appliance.	Complies

Clause	Comments and results	Conclusion
	b) How to adjust the rate and the meaning of the symbols used for various adjustment positions.	Complies
	c) Information on the phenomenon of flaring which may occur during the warm up period or if the appliance is moved. The indication on the duration of any warm up period shall be specified.	Complies
	d) For appliance with flexible hose	Complies
8.7	The following information for changing the gas container	
	a) The appliance does not use piercable containers	Not applicable
	b) check that the burners are exginguished before disconnecting the gas container	Complies
	c) Full details on how to disconnect the gas container.	Complies
	d) 'Check the seals before connecting a new gas container to the appliance.'	Complies
	e) 'Change the gas container outside and away from people'.	Complies
	f) Information for the safe connection of the gas container.	Complies
8.8	The following information on routine maintenance of the appliance	
	a) Cleaning the injector.	Complies
	b) The identification of seals replacement by the user and how to replace them.	Complies
8.9	Information for general maintenance and repairs	
	a) The text: 'Do not modify the appliance'.	Complies
	b) How to send the appliance back to the manufacturer or to a repair centre.	Complies
Annex B	Tests on needle valves	
B.1	Resistance to temperature	
	The soundness of 3 valves was checked with air at the following pressures.	Complies
	Butane and propane mixture at 0.5 bar and 12.0 bar Propane at 0.5bar and 18.0bar	Complies
	a) When tested upon delivery at ambient temperature	Complies
	b) At ambient temperature after maintaining the valves for 120 hours at 40˚C ± 5˚C	Complies
	c) After cooling to -20˚C ± 5˚C for 24 hours, in turn, at the following temperatures 0˚C + 5˚C /-0˚C; Ambient temperature 70˚C + 5˚C /-0˚C Ambient temperature	Complies
	For each test the permitted leakage rate was less than 0.07 l/h, in the valve closed and opened positions. (Jet sealed)	Complies
B.2	The soundness of 2 valves was checked using air at ambient temperature after an endurance test of 2,000 cycles at pressures of 0.5 bar and 12.0 bar. The leakage rate of the valves after the endurance test was found to be less than 0.05 l/h.	Complies

TEST SUMMARY					
Evaluation Period	8 March 2016 to 29 March 2016			Project No.	160308025GZU
Sample Rec. Date	8 March 2016	Condition	Prototype	Sample ID.	S160308025-001/002/003
Test Location	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch (Block E, No,7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, CETDD Guangzhou)				
Test Procedure	Testing Lab				

Test Program:
Full test to PQ810, PQ820 and PQ810 as the difference within the models.
The rubber material had been tested in project 160202043GZU, it would not be exposed to air, the clause 7.6, 7.7 of BS EN549: 1995 was conducted, the test result was referenced from report 160202043GZU-002 dated at 7 March 2016.

Test Data Results:

Clause 5.19 Verification of heat inputs

Model No	PQ810	PQ820	PQ830
Measured heat input kW	5.45	5.62	40.44
Declared heat input kW (Qn)	5.50	5.50	40.00
Deviation %	-0.87%	2.23%	1.11%
Limit %	±5%	±5%	±5%

Clause 5.21 Temperatures of various parts of the appliance (unit: °C)

Model: (PQ810)

Component	Measured Temp. °C	Temp. rise °C	Permitted Temp. rise °C	Verdit (P, F or Ref.)
gas container (metal)	16.1	--	50°C	P
Igniter	28.6	--	60	Ref
handle	20.8	0.8	25	P
knob	21.1	1.1	60	P
Valve	21.3	--	70°C	P

Ambient Temperature: 20° C

Model: (PQ820)

Component	Measured Temp. °C	Temp. rise °C	Permitted Temp. rise °C	Verdit (P, F or Ref.)
gas container (metal)	16.2	--	50	P
Igniter	21.9	1.9	60	P
handle	21.7	1.7	25	P
knob	21.2	1.2	60	P
Valve	21.5	--	70°C	P

Ambient Temperature: 20° C

Model: (PQ830)

Component	Measured Temp. °C	Temp. rise °C	Permitted Temp. rise °C	Verdit (P, F or Ref.)
handle	23.1	3.1	25	Ref
Hose	20.6	0.6	70	P
knob	21.8	1.8	60	P
Valve	21.6	--	70	P

Ambient Temperature: 20° C

Clause 5.26 Combustion

Model	Pressure (bar)	$(CO)_M$ ppm	$(CO_2)_M$ %	$(CO_2)_N$ %	$(CO)_N$ % (0.2%)	Result
PQ810	gas A, 0.5bar	4	1.4	14.0	0.004	P
	gas B, 5.0bar	1	0.8	13.7	0.002	P
PQ820	gas A, 0.5bar	3	1.0	14.0	0.004	P
	gas B, 5.0bar	1	0.5	13.7	0.003	P
PQ830 At ignite rate	gas C, 3.0bar	1	1.9	14.0	0.001	P
	gas B, 9.5bar	3	2.9	13.7	0.001	P
PQ830 At nominal rate	gas C, 3.0bar	9	0.9	14.0	0.014	P
	gas B, 9.5bar	5	0.8	13.7	0.009	P