Honeywell

Q334 AND Q385 “2000” series

PILOT BURNERS

INSTRUCTION SHEET

Q385A

Q334A

APPLICATION

Q334A and Q385A non primary aerated target type pilot burners provide main burner ignition for gas appliances using manufactured, natural or LP gas.

Q334A and Q385 pilot burners are used in conjunction with a Honeywell thermocouple which has to prove the presence of pilot flame before main gas is admitted into the appliance.

SPECIFICATIONS

Models

Q334A: non primary aerated **large** target type pilot burner.
Q385A: non primary aerated **small** target type pilot burner.

Q334A pilot burners are available with three mounting brackets. and with target position K (right handed) or L (left handed). See fig. 4.

Q385A pilot burners are available with three mounting brackets. and with target position K (right handed), F (straight) or L (left handed). See fig. 5.

Q385A pilot burners are provided with a clip for easy mounting of an ignition electrode.

Dimensions

Q334A: see fig. 4.
Q385A: see fig. 5.

Consumption

Q334A: approximately 250 Watt
Q385A: approximately 100 Watt

Maximum operating temperatures

At target tip:
Q334A: 815 _C
Q385A: 730 _C
At orifice assy: 340 _C

Recommended thermocouple

Q334A pilot burner is designed for use with Q309A and Q335C thermocouple.
Q385A pilot burner is designed for use with Q309A thermocouple

Recommended pressure adjustment

Type of gas	Pressure adjustment
Manufactured (I_1)	Max.
Natural (I_{2H})	Max.
Natural (I_{2L})	Max.
LP (I_3)	Max.

Accessories

To be ordered seperately, see Product Handbook EN2R-9002

INSTALLATION

IMPORTANT

Installer must be a trained, experienced service man.

Turn off gas supply before starting installation.

An important requirement for the Q334A and Q385A pilot burner is that it must be installed carefully.

Consult Honeywell application engineers when considering using these devices.

Locating pilot burner

- Position for easy access and observation.
- Position so that pilot flame will not touch adjacent parts or main burner flames.
- Position so that pilot flame will ignite main burner when pilot gas pressure just exceeds safety shut-off pressure.
- Ensure that pilot flame has an ample supply of dust free air.
- Do not expose to draughts which will extinguish pilot flame.
- Pilot burner should not extinguish when main burner is switched ON and OFF.
- Pilot burner shall be mounted in a preferably upright position.

Mounting pilot burner

Fix pilot burner to main burner at selected location. Mounting surfaces other than main burner should be avoided as much as possible since they may shift, bend or deform due to close proximity of main burner.

Mounting of ignition electrode (see fig. 1.)

- Place tip of ignition electrode between clip and bracket.
- Push ignition electrode upwards.
- Position electrode tip in the hole on the top of the bracket.
- Push ignition electrode further upwards until the thickning passes the hook of the bracket.

Remounting of ignition electrode (see fig. 1.)

- Push metal clip sidewards.
- Pull ignition electrode to disengage.

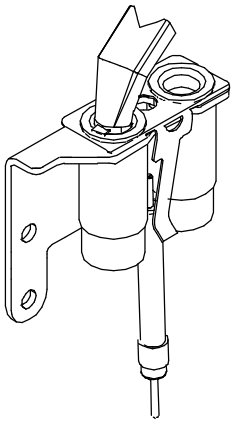

Fig. 1. Mounting of ignition electrode

Pilot gas connection (see fig. 2.)

- Square off end of tubing, clean, remove burrs and form it.
- With orifice assembly and compression fitting in position, insert tubing into target spud until it bottoms and turn compression fitting finger tight.
- Hold tubing to prevent turning and tighten compression fitting with a wrench about two turns beyond finger tight for 6 mm tubing and about $^{3}/_{4}$ turn beyond finger tight for 4 mm tubing to make a pressure tight joint.

⚠ CAUTION

Do not bend tubing near fitting after tightening as this may result in gas leakage at connection.

- Connect other end of tubing to pilot gas supply or gas control according the manufacturer's instructions.

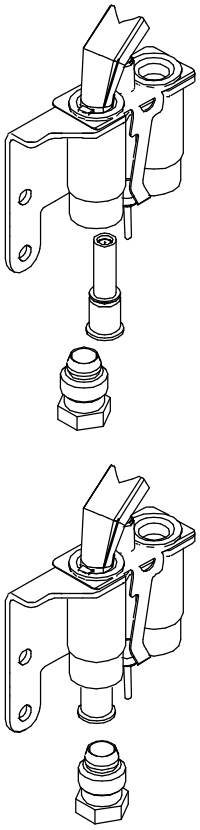

Fig. 2. Pilot gas connection

Mounting of thermocouple (see fig. 5)

Insert thermocouple tip into thermocouple spud of pilot burner and tighten with the attached nut.

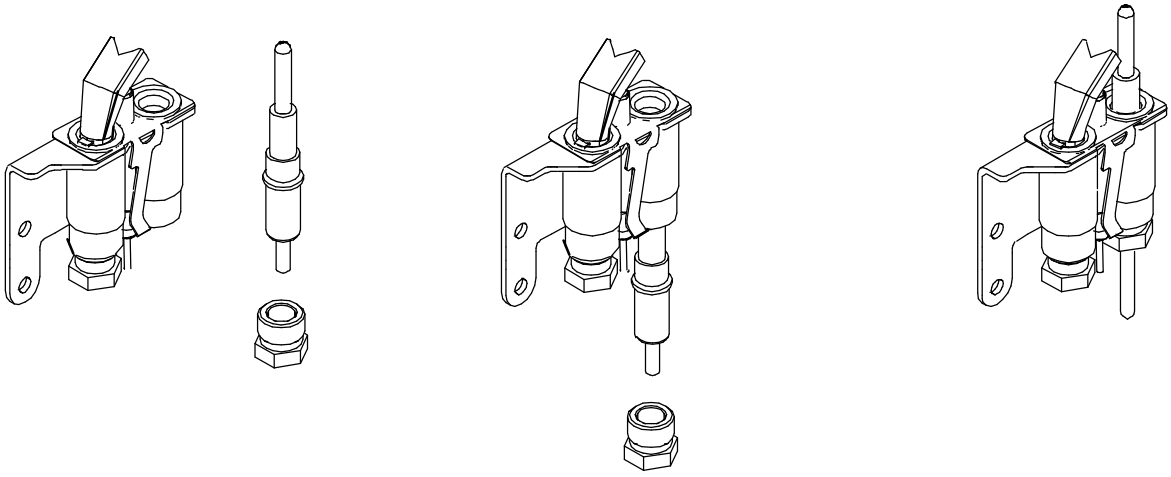

Fig. 3. Mounting of thermocouple

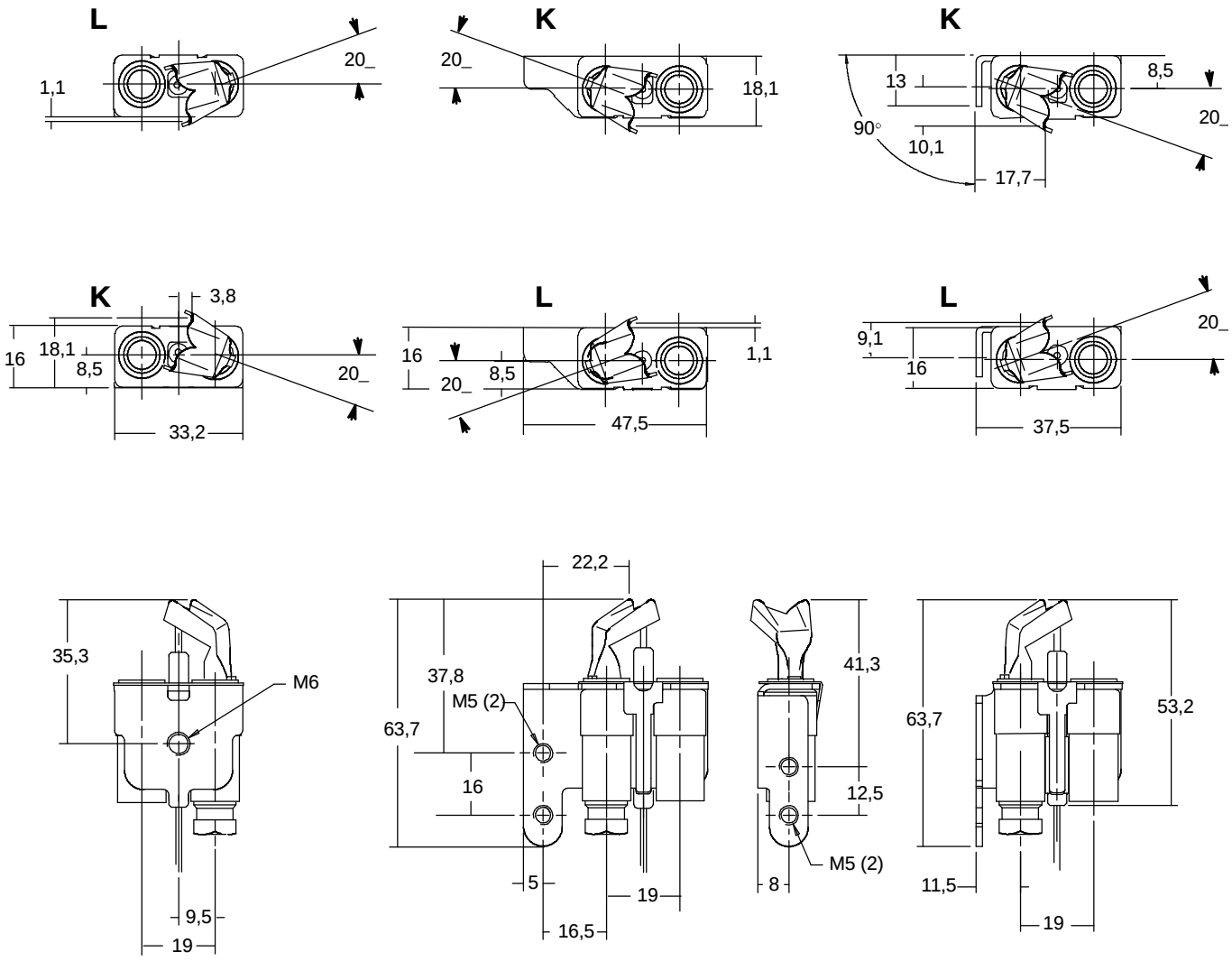

Fig. 4. Dimensions and target position Q334

ADJUSTMENT AND CHECKOUT

IMPORTANT

Adjustments should be made by qualified personel only.
If the appliance manufacturer supplies checkout and/or service and maintenance instructions, carefully follow them.

Light pilot flame

- Before lighting pilot flame, turn thermostat to the lowest setting.
- Shut off gas supply to the main and pilot burner.

⚠ CAUTION

Wait 5 minutes to allow complete venting of any unburned gas.

Remember LP gas is heavier than air and will not vent upwards.

- Turn on gas supply and light pilot flame according to the appliance manufacturer's instruction.
- Pilot flame should burn with a steady blue flame.

Test for gas leakage

Paint all joints with a rich soap and water solution. Take care not to use an agressive soap. Bubbles indicate leak. To stop leak, tighten joint or make a new one and check again. Never use a flame to check for gas leakage.

Checkout main burner ignition

⚠ WARNING

This test should be performed only after main burner gas input adjustments have been made.

Pilot burner should ignite main burner quietly and reliable under all operating conditions, including low gas supply pressure.
Pilot flame must not smother or snuff out when tested as follows:

- main burner ignition from cold-start-repeat.
- continuous operation of main burner.
- main burner ignition with appliance at maximum operating temperature after prolonged operation.

Checkout

Before leaving, set appliance in operation and observe through a complete cycle to ensure that burner system components function correctly.

TROUBLESHOOTING

Pilot outage

If pilot flame extinguishes during normal operation, recheck **Mounting** and **Location**.

It may be necessary to construct a shield to protect pilot flame against draughts and main burner ignition extinction.

Power unit drop out

If power unit of gas control fails to hold in, check the following:

- Pilot flame is correct.
- Power unit connection is clean and tight.
- If above does not cure the condition, replace thermocouple.

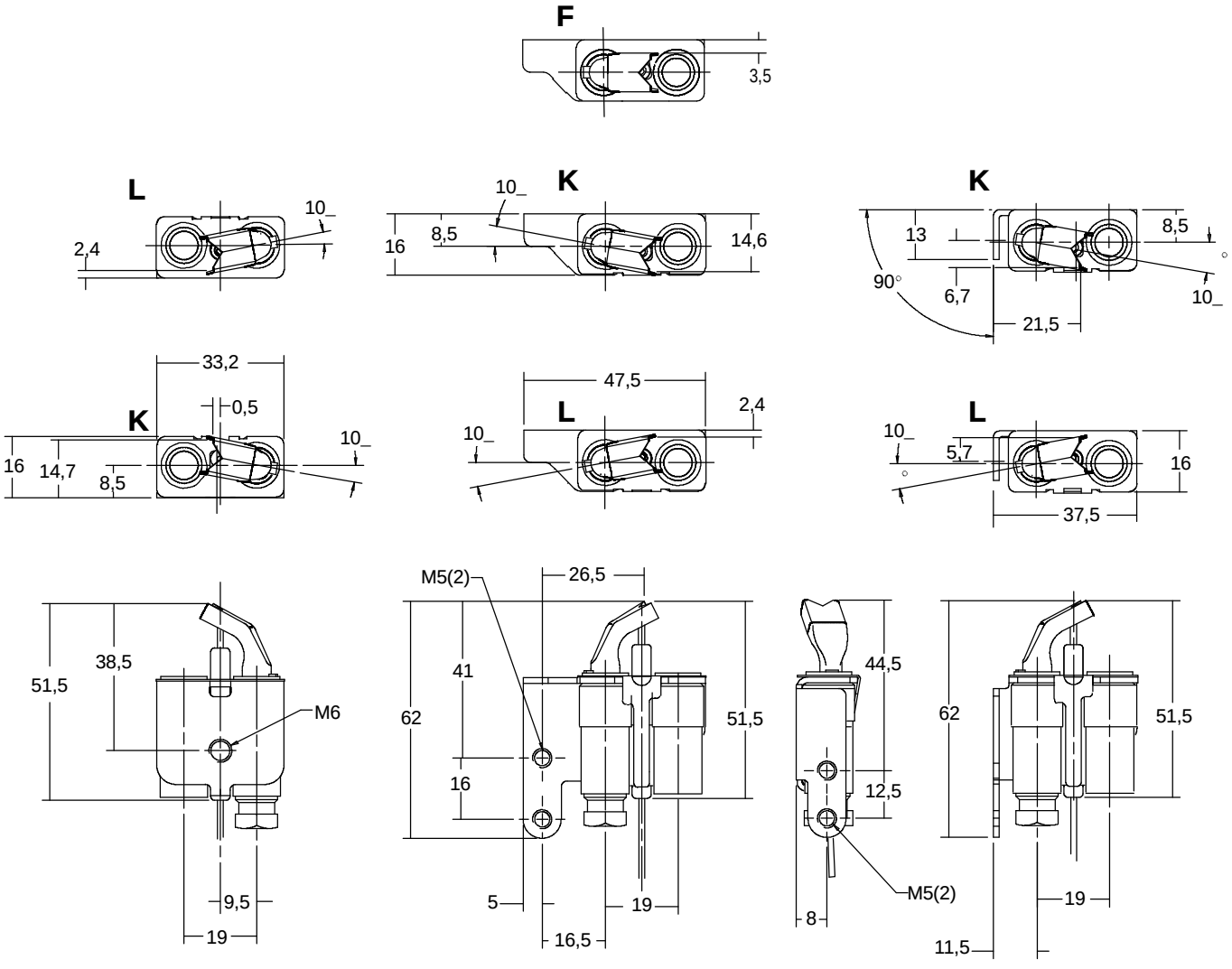

Fig. 5. Dimensions and target position Q385