FLUKE®
Calibration

PK-8270-X/PK-8370-X

Lines and Fittings Kit

Instructions

Introduction

The Fluke PK-8270-NPT/BSP/SAE and PK-8370-100M Lines and Fittings Kits (the Product) are accessories that enable pressure controllers to be connected to pressure supplies and a Device Under Test (DUT), or other accessories/systems.

- PK-8270-NPT/BSP/SAE has a maximum working pressure of 44 MPa (6400 psi).
- PK-8370-100M has a maximum working pressure of 110 MPa (16 000 psi).

How to Contact Fluke Calibration

To contact Fluke Calibration, call one of the following telephone numbers:

- Technical Support USA: 1-877-355-3225
- Calibration/Repair USA: 1-877-355-3225
- Canada: 1-800-36-FLUKE (1-800-363-5853)
- Europe: +31-40-2675-200
- Japan: +81-3-6714-3114
- Singapore: +65-6799-5566
- China: +86-400-810-3435
- Brazil: +55-11-3759-7600
- Anywhere in the world: +1-425-446-6110

To see product information and download the latest manual supplements, visit Fluke Calibration's website at www.flukecal.com.
To register your product, visit http://flukecal.com/register-product.

PN 5007274
July 2018
©2018 Fluke Corporation. All rights reserved.
All product names are trademarks of their respective companies. Specifications are subject to change without notice.

Fluke Corporation
P.O. Box 9090
Everett, WA
98206-9090
U.S.A.

Fluke Europe B.V.
P.O. Box 1186
5602 BD Eindhoven
The Netherlands

ООО «Флюк СИАЙЭС»
125167, г. Москва, Ленинградский
проспект дом 37,
корпус 9, подъезд 4, 1 этаж

Safety Information

A **Warning** identifies conditions and procedures that are dangerous to the user. A **Caution** identifies conditions and procedures that can cause damage to the Product or the equipment under test.

⚠WARNING

To prevent possible electrical shock, fire, or personal injury:

- **Read all safety information before you use the Product.**
- **Do not alter the Product and use only as specified, or the protection supplied by the Product can be compromised.**
- **Only assemble and operate high-pressure systems if you know the correct safety procedures. High-pressure liquids and gases are hazardous and the energy from them can be released without warning.**
- **Do not use the Product if it is altered or damaged.**
- **Do not exceed the specified pressure of the accessory.**
- **Safely vent pressure before disconnecting the accessory from a pressurized system.**
- **Only use PTFE thread sealing tape on NPT threads to prevent incorrect sealing that creates an unsafe condition.**

Symbols

The symbols shown in Table 1 are found in these instructions or on the Product.

Table 1. Symbols

Symbol	Definition
⚠	WARNING, RISK OF DANGER.

Box Contents

The Product is one of these kits:

PK-8270-NPT

- Supply Hose, Hand-tight fittings 2 m (6.5 ft)
- Hose Fittings, Hand tight: 1/4 NPT male (x2)
- DUT/Accessory Hose, JIC #4 (AN4) fittings 1.5 m (5 ft)
- Hose Fittings: 1/4 NPT male to JIC #4 (AN4) (x2)
- 3/8 Vacuum Tubing 2.1 m (7 ft)
- Tubing Fittings: 1/4 NPT male to 3/8 tube, and 1/4 NPT female to 3/8 tube
- PTFE Thread Sealing Tape
- Instructions

PK-8270-BSP

- Supply Hose, Hand-tight fittings 2 m (6.5 ft)
- Hose Fittings, Hand tight: 1/4 BSP male (x2)
- DUT/Accessory Hose, JIC #4 (AN4) fittings 1.5 m (5 ft)
- Hose Fittings: 1/4 BSP male to JIC #4 (AN4) (x2)
- 3/8 Vacuum Tubing 2.1 m (7 ft)
- Tubing Fittings: 1/4 BSP male to 3/8 tube, and 1/4 NPT female to 3/8 tube
- 1/4 BSP Bonded Seal
- Instructions

PK-8270-SAE

- Supply Hose, Hand-tight fittings 2 m (6.5 ft)
- Hose Fittings, Hand Tight: 7/16-20 male (x2)
- DUT/Accessory Hose, JIC #4 (AN4) fittings 1.5 m (5 ft)
- Hose Fittings: 7/16-20 male to JIC #4 (AN4) (x2)
- 3/8 Vacuum Tubing 2.1 m (7 ft)
- Tubing Fittings: 7/16-20 male to 3/8 tube, and 1/4 NPT female to 3/8 tube
- Instructions

PK-8370-100M

- Supply Hose, 2.4 m (8 ft)
- DUT/Accessory Hose, 1.8 m (6 ft)
- Gland Nut (x4)
- Collar (x4)
- Instructions

Note

- *If applicable, additional vacuum tubing and fittings are included with separate vacuum pump kits.*
- *JIC # 4 and AN4 are not identical, but the parts in these Products are interchangeable.*

Set Up

This section details Product set up.

PK-8270-NPT/BSP/SAE – Supply Hose with Hand-tight Fittings

To set up and connect the PK-8270-NPT/BSP/SAE – Supply Hose:

NPT

1. Wrap PTFE tape on the NPT threads of the two hand tight NPT adapters.
2. Install one adapter to the SUPPLY port of the 8270A controller.
3. Install the other adapter to your regulated supply pressure source.
4. Do not use PTFE tape on the hose-connection thread.
5. Connect the supply hose to the two adapters, hand tight (no tools).

BSP

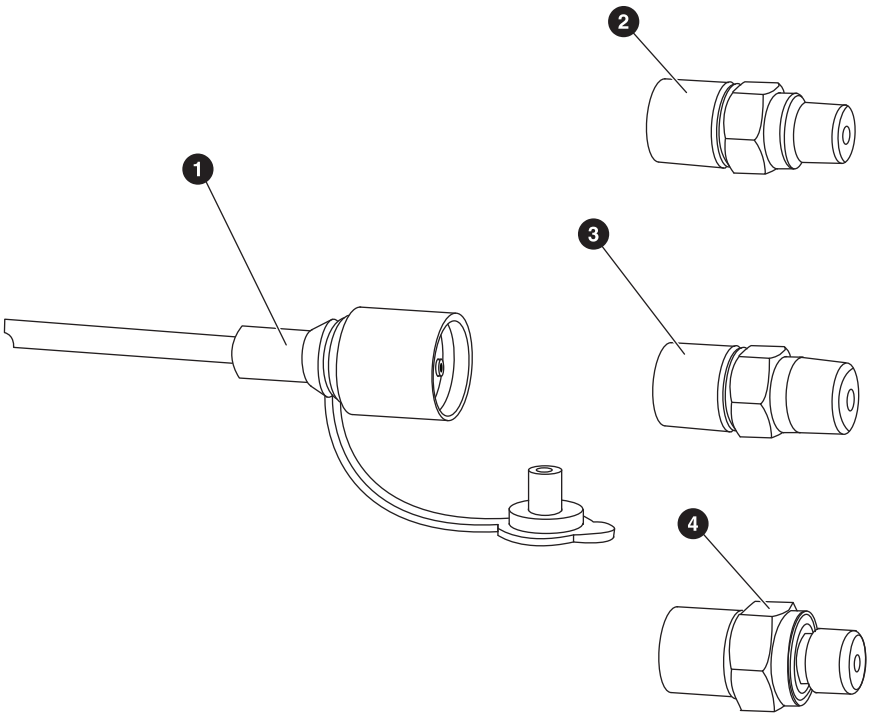
1. Make sure that the seal is on the BSP side of the two hand tight BSP adapters.
2. Install one adapter to the SUPPLY port of the 8270A controller.
3. Install the other adapter to your regulated supply pressure source.
4. Connect the supply hose to the two adapters, hand tight (no tools).

SAE

1. Make sure that the o-ring is on the SAE side of the two hand tight SAE adapters.
2. Install one adapter to the SUPPLY port of the 8270A controller.
3. Install the other adapter to your regulated supply pressure source.
4. Connect the supply hose to the two adapters, hand tight (no tools).

The components for Supply Hose connection are shown in Table 2.

Table 2. PK-8270-NPT/BSP/SAE – Supply Hose Components



lfe001.eps

Number	Item	Kit Model
1	Supply Hose, Hand-tight Fittings	PK-8270-XXX
2	7/16-20 Hand-tight Fitting	PK-8270-SAE
3	1/4 NPT Hand-tight Fitting	PK-8270-NPT
4	1/4 BSP Hand-tight Fitting	PK-8270-BSP

PK-8270-NPT/BSP/SAE – DUT/Accessory Hose

To set up and connect the PK-8270-NPT/BSP/SAE – DUT/Accessory Hose*:*

NPT

1. Wrap PTFE tape on the NPT threads of the two 1/4 inch NPT to JIC #4 (AN4) adapters.
2. Install one adapter to the TEST port of the 8270A controller and tighten with a wrench.
3. Install the other adapter to your Device Under Test (DUT) or other accessory and tighten with a wrench.
4. Do not use PTFE tape on the JIC #4 (AN4) side of the adapter.
5. Connect the DUT/Accessory hose to the two adapters and tighten with a wrench. Use a backup wrench to hold the NPT adapter in place while tightening the hose to the adapter.

BSP

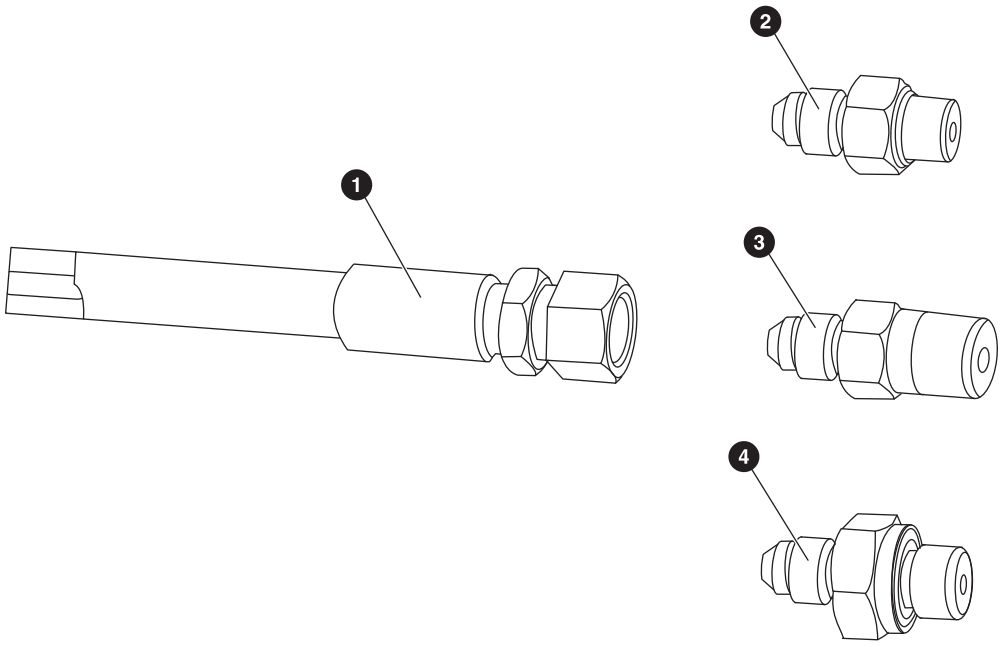
1. Make sure that the seal is on the BSP side of the two BSP adapters.
2. Install one adapter to the TEST port of the 8270A controller and tighten with a wrench.
3. Install the other adapter to your Device Under Test (DUT) or other accessory and tighten with a wrench.
4. Connect the DUT/Accessory hose to the two adapters and tighten with a wrench. Use a backup wrench to hold the NPT adapter in place while tightening the hose to the adapter.

SAE

1. Make sure that the o-ring is on the SAE side of the two SAE adapters.
2. Install one adapter to the TEST port of the 8270A controller and tighten with a wrench.
3. Install the other adapter to your Device Under Test (DUT) or other accessory and tighten with a wrench.
4. Connect the DUT/Accessory hose to the two adapters and tighten with a wrench. Use a backup wrench to hold the NPT adapter in place while tightening the hose to the adapter.

The components for DUT/Accessory Hose connection are shown in Table 3.

Table 3. PK-8270-NPT/BSP/SAE – Accessory Hose Components



lfe002.eps

Number	Item	Kit Model
1	DUT/Accessory Hose , JIC #4 (AN4) fittings	PK-8270-XXX
2	7/16-20 to JIC #4 (AN4) Fitting	PK-8270-SAE
3	1/4 NPT to JIC #4 (AN4) Fitting	PK-8270-NPT
4	1/4 BSP to JIC #4 (AN4) Fitting	PK-8270-BSP

PK-8270-NPT/BSP/SAE – Vacuum Tubing

For use only with the optional vacuum pump.
To set up the PK-8270-NPT/BSP/SAE – Vacuum Tubing:

NPT

1. Wrap PTFE tape on the NPT threads of the 1/4 inch NPT male to 3/8 inch tube adapter.
2. Install this adapter to the EXHAUST port of the 8270A controller and tighten with a wrench.
3. Connect the vacuum tubing to this adapter by normal nut and ferrule tube connection method.
4. The other end of the vacuum tubing will connect to the vacuum pump. Use the supplied 1/4 inch NPT female to 3/8 inch tube adapter, or an adapter supplied with the vacuum pump.

BSP

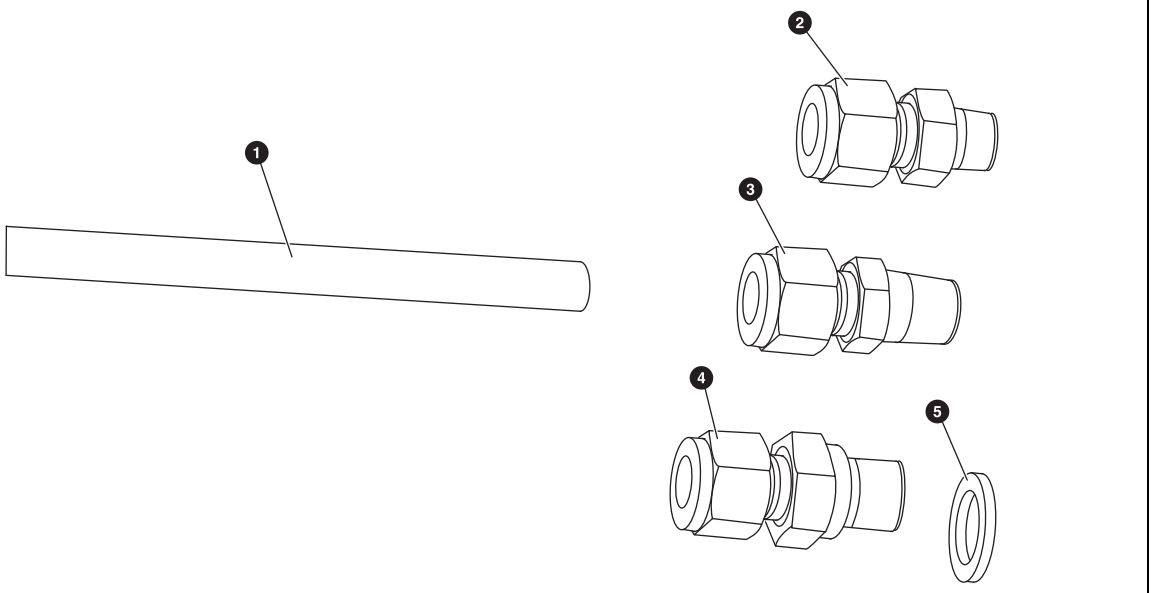
1. Install the bonded seal on the BSP side of the 1/4 inch BSP male to 3/8 inch tube adapter.
2. Install this adapter to the EXHAUST port of the 8270A controller and tighten with a wrench.
3. Connect the vacuum tubing to this adapter by normal nut and ferrule tube connection method.
4. The other end of the vacuum tubing will connect to your vacuum pump. Use the supplied 1/4 inch NPT female to 3/8 inch tube adapter, or an adapter supplied with the vacuum pump.

SAE

1. Ensure that the o-ring is on the SAE side of the SAE male to 3/8 inch tube adapter.
2. Install the SAE to 3/8 inch tube adapter to the EXHAUST port of the 8270A controller and tighten with a wrench.
3. Connect the vacuum tubing to this adapter by normal nut and ferrule tube connection method.
4. The other end of the vacuum tubing will connect to your vacuum pump. Use the supplied 1/4 inch NPT female to 3/8 inch tube adapter, or an adapter supplied with the vacuum pump.

The components of the Product are shown in Table 4.

Table 4. PK-8270-NPT/BSP/SAE – Vacuum Tubing Components



Number	Item	Kit Model
1	3/8 Vacuum Tubing	PK-8270-XXX
2	7/16-20 to 3/8 Tube Fitting	PK-8270-SAE
3	1/4 NPT to 3/8 Tube Fitting	PK-8270-NPT
4	1/4 BSP to 3/8 Tube Fitting	PK-8270-BSP
5	1/4 BSP Bonded Seal	PK-8270-BSP

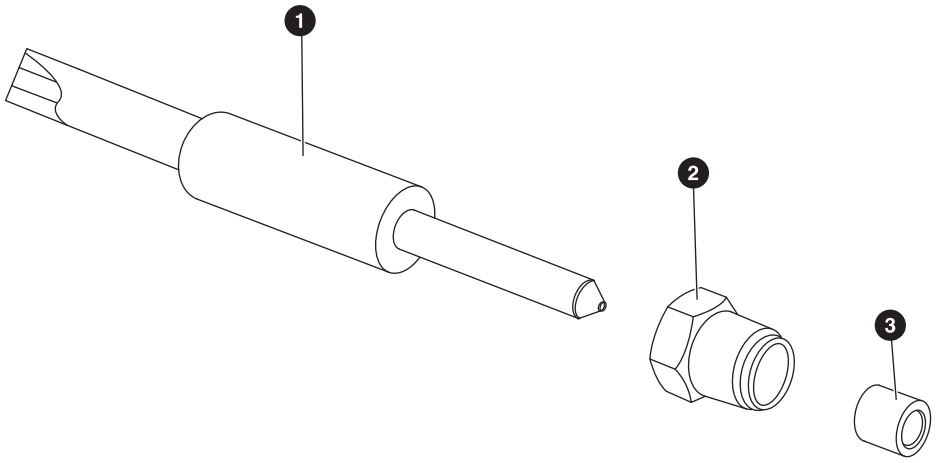
PK-8370-100M

To set up the PK-8370-100M (same instructions for both hoses):

1. Slide the gland nut over the threaded center of the hose end fitting as shown in the Table 5.
2. Screw the collar onto the threaded center of the hose end fitting, left-hand counter-clockwise thread.
3. Install the Supply Hose from the regulated high-pressure source to the SUPPLY port of the 8370A controller. Torque to 15 N · m (11 lbf · ft).
4. Install the DUT/Accessory Hose from the TEST port of the 8370A controller to the DUT/Accessory. Torque to 15 N · m (11 lbf · ft).

The hose-end fittings, gland nuts, and collars are DH500 connections (cone and threaded connections compatible with Autoclave F250C and HIP HF4).

Table 5. PK-8370-100M Components



lfe004.eps

Number	Item
1	High-pressure Supply and DUT/Accessory Hose
2	Gland Nut
3	Collar

Specifications

Operating Temperature .....-20 °C to +50 °C
Storage Temperature.....-20 °C to +70 °C
Operating Humidity .....5 % to 95 % relative humidity, non-condensing
Wetted Materials.....Stainless Steel, Brass, Zinc-plated steel, Nitrile, PTFE
Pressure Range
  PK-8270-NPT/BSP/SAE.....44 MPa (6400 psi)
  PK-8730-100M .....110 MPa (16 000 psi)
Safety.....IEC 61010-1; Pollution Degree 2

LIMITED WARRANTY AND LIMITATION OF LIABILITY

This Fluke product will be free from defects in material and workmanship for one year from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke's behalf. To obtain service during the warranty period, contact your nearest Fluke authorized service center to obtain return authorization information, then send the product to that Service Center with a description of the problem.

THIS WARRANTY IS YOUR ONLY REMEDY. NO OTHER WARRANTIES, SUCH AS FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSED OR IMPLIED. FLUKE IS NOT LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, ARISING FROM ANY CAUSE OR THEORY. Since some states or countries do not allow the exclusion or limitation of an implied warranty or of incidental or consequential damages, this limitation of liability may not apply to you.

11/99