PK-mol-KF Adaptor Kits for molbloc-S®

INSTRUCTION SHEET

FLUKE® Calibration

These adaptor kits allow the conversion of the molbloc-S ISO-KF style flange to various common types of fittings. The molbloc-S elements with the 48 mm square bodies have 16 mm ISO-KF style vacuum flange outlet fittings. The Downstream Tee Assembly (PN 401884) end fitting, and the molbloc-S elements with the 80 mm square body utilize the 25 mm ISO-KF style vacuum flange fitting. The outlet of the molbloc-S elements with the 80 mm square body utilizes the 40 mm ISO-KF style vacuum flange. These fittings can be converted to Swagelok tube fitting, VCR® face seal, male NPT or female NPT fittings using one of the following adaptor kits.

ADAPTOR KIT CONTENTS

16 mm ISO-KF Style Kits Include:

KIT PART NO	DESIGNATOR	DESCRIPTION	QTY	ADAPTOR PART NO
401890	PK-MOL-KF16-1/4SWG	16 mm ISO-KF x 1/4 in. SWG	1	103261
401891	PK-MOL-KF16-3/8SWG	16 mm ISO-KF x 3/8 in. SWG	1	103262
401892	PK-MOL-KF16-1/4VCR	16 mm ISO-KF x 1/4 in. male VCR	1	103263
401893	PK-MOL-KF16-1/2VCR	16 mm ISO-KF x 1/2 in. male VCR	1	103264
402005	PK-MOL-KF16-1/4FNPT	16 mm ISO-KF x 1/4 in. female NPT	1	103336
402006	PK-MOL-KF16-1/4MNPT	16 mm ISO-KF x 1/4 in. male NPT	1	103337
402007	PK-MOL-KF16-1/2MNPT	16 mm ISO-KF x 1/2 in. male NPT	1	103338

In addition to these adaptors, the 16 mm ISO-KF kits include:

QTY	PART NO.	DESCRIPTION
1	101544	16 mm ISO-KF Centering ring, Viton
1	103240	16 mm ISO-KF Overpressure ring
1	102975	16 mm ISO-KF Clamp

25 mm ISO-KF Style Kits Include:

KIT PART NO	DESIGNATOR	DESCRIPTION	QTY	ADAPTOR PART NO
401894	PK-MOL-KF25-1/4SWG	25 mm ISO-KF x 1/4 in. SWG	1	103265
401895	PK-MOL-KF25-3/8SWG	25 mm ISO-KF x 3/8 in. SWG	1	103266
401896	PK-MOL-KF25-1/4VCR	25 mm ISO-KF x 1/4 in. male VCR	1	103267
401897	PK-MOL-KF25-1/2VCR	25 mm ISO-KF x 1/2 in. male VCR	1	103268
401986	PK-MOL-KF25-1/2SWG	25 mm ISO-KF x 1/2 in. SWG	1	103317
401987	PK-MOL-KF25-3/4SWG	25 mm ISO-KF x 3/4 in. SWG	1	103318
401988	PK-MOL-KF25-1/4FNPT	25 mm ISO-KF x 1/4 in. female NPT	1	103319
401989	PK-MOL-KF25-1/2FNPT	25 mm ISO-KF x 1/2 in. female NPT	1	103320
401990	PK-MOL-KF25-3/4FNPT	25 mm ISO-KF x 3/4 in. female NPT	1	103321
401991	PK-MOL-KF25-1FNPT	25 mm ISO-KF x 1 in. female NPT	1	103322
401992	PK-MOL-KF25-1/4MNPT	25 mm ISO-KF x 1/4 in. male NPT	1	103323
401993	PK-MOL-KF25-1/2MNPT	25 mm ISO-KF x 1/2 in. male NPT	1	103324
401994	PK-MOL-KF25-3/4MNPT	25 mm ISO-KF x 3/4 in. male NPT	1	103325
401995	PK-MOL-KF25-1MNPT	25 mm ISO-KF x 1 in. male NPT	1	103307

In addition to these adaptors, the 25 mm ISO-KF kits include:

QTY	PART NO.	DESCRIPTION
1	101542	25 mm ISO-KF Centering ring, Viton
1	103241	25 mm ISO-KF Overpressure ring
1	102121	25 mm ISO-KF Clamp

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40 mm ISO-KF Style Kits Include:

KIT PART NO.	DESIGNATOR	DESCRIPTION	QTY	ADAPTOR PART NO.
401996	PK-MOL-KF40-1/2SWG	40 mm ISO-KF x 1/2 in. SWG	1	103327
401997	PK-MOL-KF40-3/4SWG	40 mm ISO-KF x 3/4 in. SWG	1	103328
401998	PK-MOL-KF40-1SWG	40 mm ISO-KF x 1 in. SWG	1	103329
401999	PK-MOL-KF40-1/2FNPT	40 mm ISO-KF x 1/2 in. female NPT	1	103330
402000	PK-MOL-KF25-3/4FNPT	40 mm ISO-KF x 3/4 in. female NPT	1	103331
402001	PK-MOL-KF25-1FNPT	40 mm ISO-KF x 1 in. female NPT	1	103332
402002	PK-MOL-KF25-1/2MNPT	40 mm ISO-KF x 1/2 in. male NPT	1	103333
402003	PK-MOL-KF25-3/4MNPT	40 mm ISO-KF x 3/4 in. male NPT	1	103334
402004	PK-MOL-KF25-1MNPT	40 mm ISO-KF x 1 in. male NPT	1	103252

In addition to these adaptors, the 40 mm ISO-KF kits include:

QTY	PART NO.	DESCRIPTION
1	103245	40 mm ISO-KF Centering ring, Viton
1	103309	40 mm ISO-KF Overpressure ring
1	103246	40 mm ISO-KF Clamp

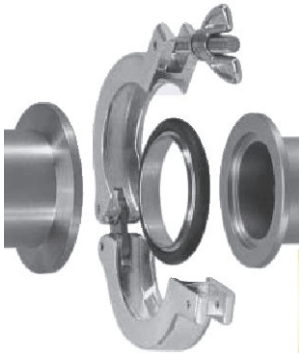
CONNECTING, DISCONNECTING AND MOUNTING MOLBLOC-S COMPONENTS WITH ISO-KF STYLE VACUUM FLANGE

ISO-KF Style Vacuum Flange Fittings

The outlet connection system on the molbloc-S body is the ISO-KF style vacuum flange. It utilizes an internal centering ring, an external overpressure ring and clamp. The seal is effected by the uniform application of pressure by the clamp on the 15° surface of the mating stainless steel flanges. These mating flange surfaces compress a Viton® O-ring that is held in place by the centering ring. The overpressure ring keeps the O-ring in place, and maintains a leak free connection when the system is subjected to internal pressures above vacuum level. This connection is reusable, rotatable, and can operate leak free in vacuum applications up to 10^{-8} Torr, and in positive pressures of 700 kPa (100 psig).

When performing a leak test of a plumbing system that contains the ISO-KF Style Vacuum Flanges, do not exceed the maximum operating pressure of the molbox: 600 kPa (87 psia) for molbox A700k; 250 kPa (36 psia) for molbox A350K.

Making and Breaking Procedure for molbloc-S ISO-KF Vacuum Flange Connection



❶ Place the overpressure ring past one of the ISO-KF flanges to be mated.

❷ Place the centering ring into the groove of the ISO-KF flange on the outlet of the molbloc-S.

❸ Align the mating flange against molbloc's ISO-KF flange, and close the gap by hand.

❹ Hold the flanges together and move the overpressure ring directly over the mated flanges.

❺ Place the clamp around the mated flanges. Swing the clamp closed. If necessary loosen the thumbscrew to allow the thrust washer and wing nut to fall into position on top of the clamp. Fully tighten the wing nut by hand.

❻ To break the fitting, hold the molbloc-S with your hand and loosen the wing nut until the clamp can be separated. Remove the clamp, centering ring, and overpressure ring.

Never use wrenches to hold the molbloc-S body, or to tighten the clamp.