



COMMERCIAL KITCHEN EXHAUST SYSTEMS

Grease Ducts for Commercial Kitchen Ventilation, Dishwashers, Industrial Cooking Ovens, and Gas or Wood Burning Pizza Ovens



SINGLE AND DOUBLE-WALL KITCHEN EXHAUST SYSTEMS

Jeremias is the leader in UL Listed Factory-Built Grease Duct systems with the largest lineup options in USA. The new Patent-Pending ‘CK’ Commercial Kitchen product has been designed from the ground up to reduce cost and be the fastest/easiest to install. Joint features include:

- The longest overlapping joint in the industry
- Standard silicone is used, protected by 2.2” of overlapping steel
- Cut-to-fit technology with overlapping inner and outers
- Specifically designed 10-item stock list that can take care of 80% of systems
- No ‘V’ band or insulation blanks/cookies required
- Compressed insulation versus metal brackets allowing best in class clearance to combustibles

Jeremias Grease Ducts come in single-wall, double-wall reduced clearance, and double-wall zero clearance and 2-hour fire rated:

- Single-Wall: Models SWCK and SWGD-R
- Double-Wall Reduced Clearance: Model DWCK+1
- Double-Wall Zero Clearance and 2-Hour Fire Rated: Models DWCK-ZC and DWGD-RZ

Single-wall SWCK and SWGD-R are no-weld alternatives to field-welded black steel. Manufactured in all-stainless steel and they require 18-inch clearance to combustibles if left unwrapped. Either may installed inside a non-combustible fire rated enclosure or wrapped in accordance with NFPA-96 requirements.

Double-wall reduced clearance Model DWCK+1 is also manufactured in all-stainless steel and has 1.5” of ceramic fiber, compressed into a 1.25” space between the inner and outer. This gives a dramatic reduced clearance to combustibles of:

- I.D. 3 - 14” = 2”
- I.D. 16 - 34” = 3”
- I.D. 36” = 4”
- I.D. 38 - 48” = 5”

Double-wall zero clearance and 2-hour fire resistance shaft assembly Models DWCK-ZC and DWGD-RZ also carry the UL 2221 Standard for tests of Fire Resistive Grease Duct Enclosure Assemblies. This is required when you penetrate a fire rated ceiling or wall and uses a through penetration firestop.

Installation of the Rectangular GD Series is flange to flange. Rectangular doesn’t clean as easy as Round, cost a little more, and has no flexibility in the field – but Jeremias understands that sometimes Round just doesn’t fit. You may use Rectangular where needed and then back to/from Round.



SWCK



SWGD-R



DWCK+1



DWCK-ZC



DWGD-RZ

Installation of the Round CK Series is the fastest and easiest in the industry:



[SWCK YOUTUBE INSTALLATION VIDEO](#)

[DWCK+1 AND DWCK-ZC YOUTUBE INSTALLATION VIDEO](#)



SINGLE-WALL EXHAUST SYSTEMS

Jeremias factory-built single-wall exhaust systems are UL 1978 labeled and a direct replacement for field-welded steel connecting cooking appliances, kitchen hoods and dishwasher exhausts to the outdoors. Eliminating the welding process on-site dramatically reduces labor and saves time. The all-stainless steel construction provides safety aspects and can withstand the UL 1978 stringent 2000°F 30 minute abnormal internal temperature test that simulates a grease fire, where carbon steel only lasts several minutes into that 30 minute test.

SWCK:

2.2" overlapping joint with Patent-Pending light weight technology and double female expanded socket permits the fastest alignment and installation on the market.

SWCK Stock Items are specifically deigned to achieve short SKU list of parts for the industry's fastest ship times. For example, we stock 2' and 4' lengths, these pipe lengths can easily be field-cut to any distance needed. The stock 45-degree and 87-degree elbows have access panels on them already as Codes dictate access is required at each change of direction. Stock no-weld hood adapters permit easy balancing of multiple hoods - so if your hood outlet is rectangular, have that rectangular collar shipped loose to use our stock no-weld hood adapters!

SWGDR:

Single wall rectangular grease duct allows an alternative use of a space in certain restrictive conditions. This is a flange-to-flange system with little or no flexibility at the jobsite. SWGD-R may be intermixed with all other Jeremias Round systems once space restraints are passed.

DOUBLE-WALL EXHAUST SYSTEMS

Jeremias double-wall and factory-insulated exhaust systems are UL 1978 labeled and a direct replacement for both, field-welded and field-insulated systems, for connecting cooking appliances, kitchen hoods and gas/wood burning pizza ovens to the outdoors. Eliminating the welding process on-site and possibly a second trade for insulation dramatically reduces labor and saves time. A single inspection is all that is needed to start operation (versus minimum two and sometimes three inspections for welded steel and field applied insulation).

DWCK+1:

DWCK+1 has the same 2.2" overlapping joint as SWCK and uses 1.5" ceramic fiber insulation that is compressed into a 1.25" space. There is no required insulation cookie/blanket that needs to be applied to the joint as the assembled joint is already entirely filled with the ceramic insulation after aligning and pushing together. The single outer band assures correct assembly.

DWCK+1 has all the same Stock Items as SWCK. You can also intermix DWCK+1 with all other single and double wall Jeremias Models as needed. Remember to have rectangular hood exhaust collar shipped loose!

DWCK+1 carries additional UL 103, UL 103 Type HT, UL 2561, and UL 103 positive pressure labels that are applicable for building heating appliance chimneys as well as exhaust systems for gas and wood burning pits and pizza ovens.

DWCK+1 can be used on all single-story buildings (no need for -ZC Models) or multistory buildings when an existing fire rated shaft is in place. With the 2" clearance to combustibles a 14" I.D. duct can pass through a 24" on-center wood truss bay. There is a zero-clearance thimble used on the combustible roofs when a fan curb is not used.



DOUBLE-WALL FIRE RATED EXHAUST SYSTEMS

Jeremias heavily ceramic fiber insulated Models are UL 1978 and UL 2221 label as a 2-hour fire-rated system that can be installed with Zero Clearance to combustibles. There is no need for an additional fire rated shaft when routing these systems throughout the building. Simply use the through firestop penetration assemblies when passing through a fire rated ceiling or wall. The all-stainless steel construction provides safety aspects and can withstand the UL 1978 stringent 2000°F 30 minute abnormal internal temperature test that simulates a grease fire, where Carbon Steel ducts have shown to last a few minutes into that 30 minute test.

Both Zero clearance Models eliminate the need for fire dampers when using these ductworks for HVAC Ducts, Landry, or fume venting applications.

DWCK-ZC:

DWCK-ZC has the same 2.2" overlapping joint as SWCK/DWCK+1 and uses 3.5" ceramic fiber insulation that is compressed into a 3.25" space. There is no required insulation cookie/blanket that needs to be applied to the joint as the assembled joint is already entirely filled with the ceramic insulation after aligning and pushing together. The single outer band assures correct assembly.

DWCK-ZC has all the same Stock Items as SWCK/DWCK+1. You can also intermix DWCK-ZC with all other single and double wall Jeremias Models as needed. For example, use DWCK+1 inside the kitchen and switch to DWCK-ZC before you penetrate the fire rated ceiling or wall.

DWCK-ZC carries the additional ISO 6944 Fire Resistance Tests for Ventilation Ducts. As well as ANSI/UL 1479 (ASTM E814) Fire Tests of Penetration Firestops and CAN/ULC-S115 Method of Fire Tests of Firestop Systems.



DWGD-RZ:

Rectangular double wall and zero clearance grease duct allows an alternative use of a space in certain restrictive conditions. This is a flange-to-flange system with little or no flexibility at the jobsite. DWGD-RZ may be intermixed with all other Jeremias Round systems once space restraints are passed.





UL 1978 AND UL 2221 TESTING

DWCK-ZC:

All Jeremias Models are listed to UL 1978 Standard. This Standard requires an Internal Fire Test where the flue gases entering the duct are elevated to 2000°F for 30 minutes. During this time, the temperature on the exterior duct is measured and must not exceed a specified temperature threshold.

The DWCK-ZC and DWGD-RZ Models have an additional UL 2221 External Fire Test to simulate the duct being engulfed in a building fire. The test requires the duct to be located inside an oven for 2 hours with temperatures at 2000°F. Through penetration firestops are placed at the concrete oven duct penetration. The duct systems must maintain its integrity and duct section passing through the firestop must not exceed specified temperatures. Immediately after the fire exposure, the duct is quenched with a fire hose spray causing a thermal shock. The duct must maintain its integrity and prevent the water stream from passing through the firestop.

The result is a Code Approved 2-hour fire rated enclosure for DWCK-ZC and DWGD-RZ.

Jeremias DWCK-ZC shown after multiple UL 1978 and UL 2221 30-minute internal exposures at 2000°F.

RECTANGULAR BLACK STEEL FAILS UL TEST

For comparison, Jeremias subjected a rectangular 16 gauge welded black steel duct with two layers of fire wrap insulation to the same UL 1978 and UL 2221 internal fire test. After three (3) minutes into the thirty (30) minute test, the rectangular duct collapsed, and the test was stopped.

Watch this  **YouTube** video here:

[RECTANGULAR BLACK STEEL FAILED TESTING](#)

AFTER MULTIPLE 30 MIN. EXPOSURES AT 2000°F



BEFORE



AFTER (3 MINUTES @ 2000°F)



RESEARCH AND DEVELOPMENT

Opened in 2013, Jeremias R&D Lab in Logan, Ohio has the industry most experienced lab technicians on staff and incorporates the latest equipment and technologies. This enables Jeremias to provide industry leadership with a continued focus on new factory-Built exhaust applications and unique listings.

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Jeremias high quality products to be installed only by selected experts.

The expert in your area: