

# **Kitchen Grease Duct**



## Kitchen Exhaust/Grease Rectangular Duct (J-Swedge Joints)

### 16ga Carbon Steel Construction (Black Iron, Galvanized)

Duct Size	Connector	Seam	10' Sections				5' Sections			
			Gauge	Length	Joint	Reinforcing	Intermediate Reinforcing	Length	Joint Reinforcing	Intermediate Reinforcing
0-36"	J-Swedge	Welded	16ga	116 3/4"	-	-	-	56 3/4"	-	-
to 48"	J-Swedge	Welded	16ga	116 3/4"	-	-	2x1 1/8x16ga Zbar	56 3/4"	-	2x1 1/8x16ga Zbar
to 54"	J-Swedge	Welded	16ga	116 3/4"	2x1 1/8x12ga Zbar	2x1 1/8x12ga Zbar	-	56 3/4"	-	2x1 1/8x12ga Zbar
to 60"	J-Swedge	Welded	16ga	116 3/4"	2x1 1/8x10ga Zbar	2x1 1/8x10ga Zbar	-	56 3/4"	-	2x1 1/8x10ga Zbar
to 72"	J-Swedge	Welded	16ga	n/a	n/a	n/a	n/a	56 3/4"	2x1 1/8x12ga Zbar	2x1 1/8x12ga Zbar
to 84"	J-Swedge	Welded	16ga					56 3/4"	2x1 1/8x10ga Zbar	2x1 1/8x10ga Zbar
to 96"	J-Swedge	Welded	16ga					56 3/4"	3x1 1/8x12ga Zbar	3x1 1/8x12ga Zbar
Over-96"										

### 18ga Stainless Steel Construction (304, 316)

Duct Size	Connector	Seam	10' Sections				5' Sections			
			Gauge	Length	Joint	Reinforcing	Intermediate Reinforcing	Length	Joint Reinforcing	Intermediate Reinforcing
0-30"	J-Swedge	Welded	18ga	116 3/4"	-	-	-	56 3/4"	-	-
to 48"	J-Swedge	Welded	18ga	116 3/4"	-	-	2x1 1/8x16ga Zbar	56 3/4"	-	2x1 1/8x16ga Zbar
to 54"	J-Swedge	Welded	18ga	116 3/4"	2x1 1/8x12ga Zbar	2x1 1/8x12ga Zbar	-	56 3/4"	-	2x1 1/8x12ga Zbar
to 72"	J-Swedge	Welded	18ga	n/a	n/a	n/a	n/a	56 3/4"	2x1 1/8x12ga Zbar	2x1 1/8x12ga Zbar
to 84"	J-Swedge	Welded	18ga					56 3/4"	2x1 1/8x10ga Zbar	2x1 1/8x10ga Zbar
to 96"	J-Swedge	Welded	18ga					56 3/4"	3x1 1/8x12ga Zbar	3x1 1/8x12ga Zbar
Over-96"										

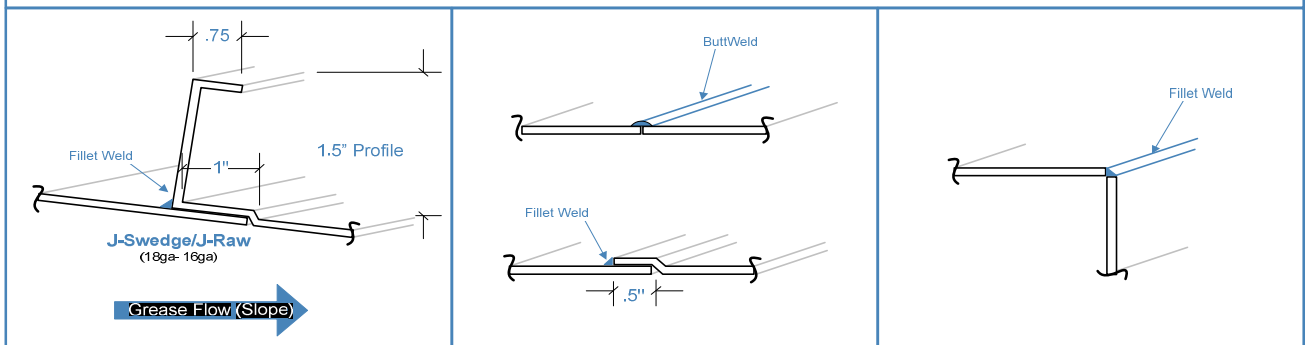
#### Notes

1. Joint Lengths 1/2 of Joint Spacing or Less DO NOT Require ANY Intermediate Reinforcing
2. All Joints to be J-Swedge Connection and with Fillet Weld (G-Rating)
3. All Seams to Butt Welded.
4. All External Reinforcing, NO Internal Reinforcing

#### Reinforcement Ratings

- (H) 2x1 1/8 x 16ga Zbar  
 (I) 2x1 1/8 x 12ga Zbar  
 (J) 2x1 1/8 x 10ga Zbar  
 (K) 3x1 1/8 x 12ga Zbar

#### Weld Joints / Seams



#### References

**SMACNA** (2005 3rd Edition, HVAC Duct Construction Standards Metal and Flexible)  
 Table [2-5] Rectangular Duct Reinforcement to 4 in. (+-) wg  
 Table [2-29] Intermediate Reinforcement

#### CMC

(2013 California Mechanical Code)  
 Section 510.5.1 Materials. Ducts shall be constructed of and supported by carbon steel not less than 0.054 of an inch (1.37 mm) (No. 16 MSG) in thickness or stainless steel not less than 0.043 of an inch (1.09 mm) (No. 18 MSG) in thickness.

## Kitchen Exhaust/Grease Rectangular Duct (1/2" Flange Joints)

### 16ga Carbon Steel Construction (Black Iron, Galvanized)

Duct Size	Connector	Seam	10' Sections				5' Sections		
			Gauge	Length	Joint Reinforcing	Intermediate Reinforcing	Length	Joint Reinforcing	Intermediate Reinforcing
0-30"	1/2" WeldFlg	Welded	16ga	119"	-	-	59"	-	-
to-36"	1/2" WeldFlg	Welded	16ga	119"	-	2x1 1/8x10ga Zbar	59"	-	2x1 1/8x16ga Zbar
to 54"	1/2" WeldFlg	Welded	16ga	119"	2x1 1/8x12ga Zbar	2x1 1/8x12ga Zbar	59"	-	2x1 1/8x12ga Zbar
to 60"	1/2" WeldFlg	Welded	16ga	119"	2x1 1/8x10ga Zbar	2x1 1/8x10ga Zbar	59"	-	2x1 1/8x10ga Zbar
to 72"	1/2" WeldFlg	Welded	16ga	n/a			59"	2x1 1/8x12ga Zbar	2x1 1/8x12ga Zbar
to 84"	1/2" WeldFlg	Welded	16ga				59"	2x1 1/8x10ga Zbar	2x1 1/8x10ga Zbar
to 96"	1/2" WeldFlg	Welded	16ga				59"	3x1 1/8x12ga Zbar	3x1 1/8x12ga Zbar
Over-96"									

### 18ga Stainless Steel Construction (304, 316)

Duct Size	Connector	Seam	10' Sections				5' Sections		
			Gauge	Length	Joint Reinforcing	Intermediate Reinforcing	Length	Joint Reinforcing	Intermediate Reinforcing
0-24"	1/2" WeldFlg	Welded	18ga	119"	-	-	59"	-	-
to-30"	1/2" WeldFlg	Welded	18ga	119"	-	2x1 1/8x16ga Zbar	59"	-	2x1 1/8x16ga Zbar
to 54"	1/2" WeldFlg	Welded	18ga	119"	2x1 1/8x12ga Zbar	2x1 1/8x12ga Zbar	59"	-	2x1 1/8x12ga Zbar
to 72"	1/2" WeldFlg	Welded	18ga	n/a			59"	2x1 1/8x12ga Zbar	2x1 1/8x12ga Zbar
to 84"	1/2" WeldFlg	Welded	18ga				59"	2x1 1/8x10ga Zbar	2x1 1/8x10ga Zbar
to 96"	1/2" WeldFlg	Welded	18ga				59"	3x1 1/8x12ga Zbar	3x1 1/8x12ga Zbar
Over-96"									

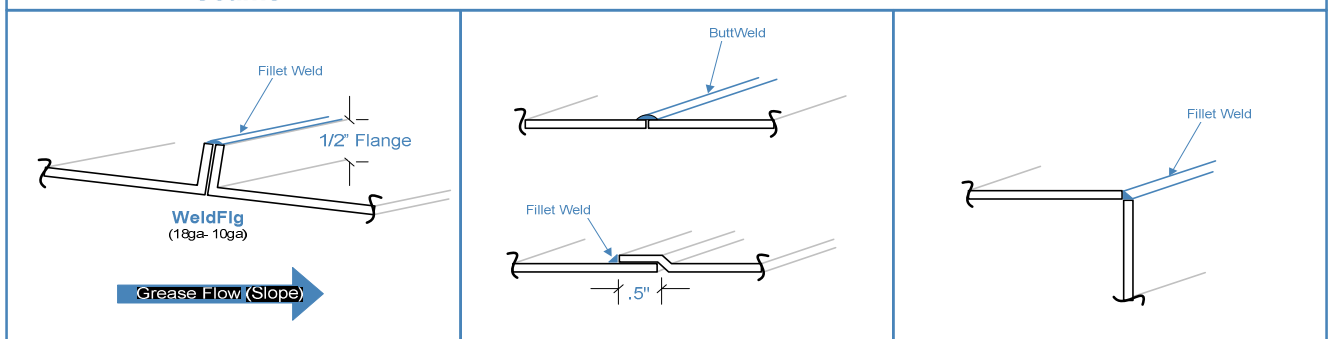
#### Notes

1. Joint Lengths 1/2 of Joint Spacing or Less DO NOT Require ANY Intermediate Reinforcing
2. All Joints to be 1/2" Welded Flange Connections and with Fillet Weld
3. All Seams to Butt Welded.
4. All External Reinforcing, NO Internal Reinforcing

#### Reinforcement Ratings

- (H) 2x1 1/8 x 16ga Zbar  
 (I) 2x1 1/8 x 12ga Zbar  
 (J) 2x1 1/8 x 10ga Zbar  
 (K) 3x1 1/8 x 12ga Zbar

#### Weld Joints / Seams



#### References

**SMACNA** (2005 3rd Edition, HVAC Duct Construction Standards Metal and Flexible)  
 Table [2-5] Rectangular Duct Reinforcement to 4 in. (+-) wg  
 Table [2-29] Intermediate Reinforcement

#### CMC

(2013 California Mechanical Code)  
 Section 510.5.1 Materials. Ducts shall be constructed of and supported by carbon steel not less than 0.054 of an inch (1.37 mm) (No. 16 MSG) in thickness or stainless steel not less than 0.043 of an inch (1.09 mm) (No. 18 MSG) in thickness.

## Kitchen Exhaust/Grease Round Pipe (Swedge Joints)

### 16ga Carbon Steel Construction (Black Iron, Galvanized)

Pipe Diameter	Length	Gauge	Joint Connector	Joint Reinforcing	Intermediate Reinforcing	Longitudinal Seam
0-42"	Any	16ga	Welded Swedge	-	-	1/2" Lap WeldSeam
to 72"	Any	16ga	Welded Swedge	-	1 1/2"x1 1/2"x3/16" Angle @10'Spacing	1/2" Lap WeldSeam
Over-72"	n/a					

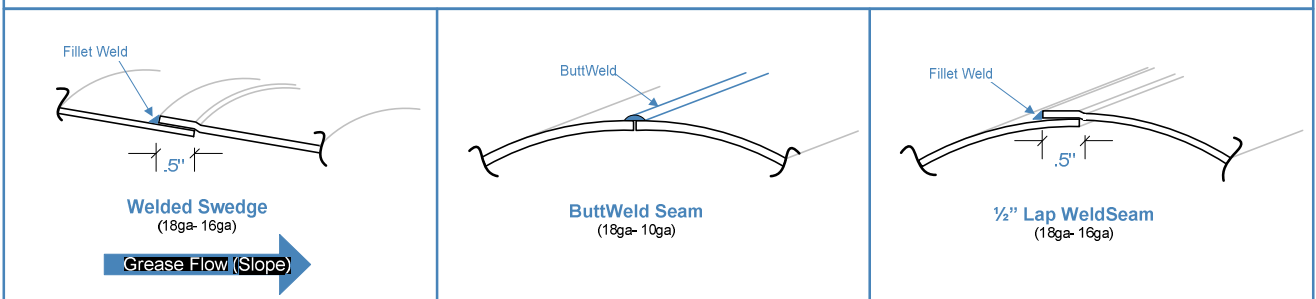
### 18ga Stainless Steel Construction (304, 316)

Pipe Diameter	Length	Gauge	Joint Connector	Joint Reinforcing	Intermediate Reinforcing	Longitudinal Seam
0-30"	Any	18ga	Welded Swedge	-	-	1/2" Lap WeldSeam
to 72"	Any	18ga	Welded Swedge	-	1 1/2"x1 1/2"x3/16" Angle @10'Spacing	1/2" Lap WeldSeam
Over-72"	n/a					

#### Notes

1. Joint Lengths 1/2 of Joint Spacing or Less DO NOT Require ANY Intermediate Reinforcing (Unless Noted).
2. All Joints to be Swedge/Raw Connection and with Fillet Weld
3. All Seams to be Welded.
4. NO Reinforcing Required

#### Weld Joints & Seams



#### References

##### SMACNA

(2005 3rd Edition, HVAC Duct Construction Standards Metal and Flexible)

Table 3-2 Angle Ring Size

Table [3-11] Min. Required Gauge for Longitudinal Seam Duct to 4 in. (+) wg

Figure [3-2] Round duct Longitudinal Seams

##### CMC

(2013 California Mechanical Code)

Section 510.5.1 Materials. Ducts shall be constructed of and supported by carbon steel not less than 0.054 of an inch (1.37 mm) (No. 16 MSG) in thickness or stainless steel not less than 0.043 of an inch (1.09 mm) (No. 18 MSG) in thickness.

#### Reinforcement Ratings

##### Class (C)

1 1/2 x 1 1/2 x 3/16" Angle Ring