

## Submittal

ITEM	DESCRIPTIONS	MATERIALS	REMARKS
1	Frame	Stainless steel, 3mm thk.	
2	Blade	Stainless steel, 4mm thk.	
3	Flange	Stainless steel, 4mm thk.	38mm for size ≤500mm, 50mm for size >500mm
4	Bush	Teflon	
5	Packing housing	Stainless steel	
6	Packing housing cover	Stainless steel	
7	Blade seal	Silicon, 4.7mm thk.	Hardness, 50 Duro
8	Blade shaft	Stainless steel	Ø20 for size <600mm, Ø25 for size ≥ 600mm
9	Stiffeners	Stainless steel, 3mm thk.	
10	Operator	Cast iron worm gear	
11	Bearing	Stainless steel with teflon insert	
12	Blade stopper	Stainless steel	
13	Operator mounting bracket	Stainless steel, 3mm thk.	
14	Packing	Teflon in square shape, 4 layers	6x6mm for Ø20 blade shaft, 8x8mm for Ø25 blade shaft

### COATING FINISHES OPTIONS:

- ☐ None  
☐ Specify : \_\_\_\_\_

### MATERIAL OPTIONS:

- ☐ Stainless Steel 304 (SUS304, 2B finish)  
☐ Stainless Steel 316 (SUS316L, 2B finish)

\*For other materials please consult factory.

### DAMPER SIZE:

Min. size (ØD): Ø150mm  
Max. size (ØD): Ø1150mm

TABLE 1:

Nominal Height, H	Depth, D
150-399	200
400-549	250
550-749	300
750-949	350
950-1099	400
1100-1150	450

### APPLICATION:

OLS isolation damper is designed for sealing off and/or controlling airflow in round, square/rectangle ducts and provides airtight seal to a differential pressure of 7000 Pa. In a biohazard environment, the dampers enable the air filter bank to be isolated for decontamination, and/or filter changing. A variety of sizes are available for a wide range of air flows.

### CONSTRUCTION:

1. Frame is constructed of heavy gage stainless steel with flanges fully welded to both ends. Holes are pre-cut on the flanges with maximum distance (SP) of 75mm.
2. Blade is double skin with stiffeners as required for higher blade strength.
3. Blade shaft is constructed of stainless steel. Diameter of blade axle is Ø20mm or Ø25mm depending on size.
4. Blade seal is constructed of silicon, 4.7mm thk. and is specially designed to provide tight seal when the blade is closed.
5. Shaft seal is constructed of comparison type packing gland continuously welded to damper frame; packing is made of Teflon material and well be replaced if necessary.
6. Flange dimension, C varies with damper size as required for higher structures strength.
7. Depth dimension, D varies with damper size (refer to Table 1) to prevent blade seal from rubbing against adjacent duct connection.

### NOTE:

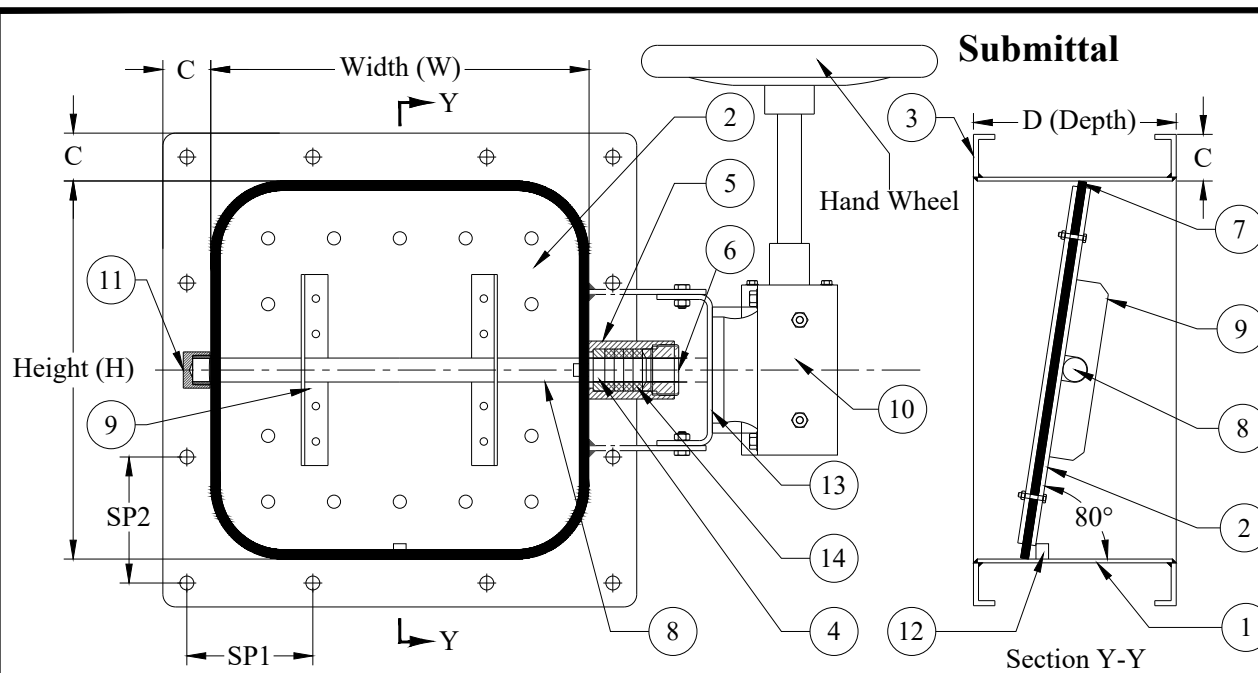
1. By standard, product is mill finished.

### TYPICAL AREAS:

Hospital Isolation Units / Pharmaceutical Facilities / Microelectronic Sites / Food Processing / Laboratory Facilities / Industrial Process Exhaust Systems / Chemical Process Facilities / Animal Disease Laboratories / Nuclear Power Plants / HVAC Systems / Department of Energy Facilities / Military Facilities

In the interest of product improvement, we reserved the right to make changes without notice.

All dimensions are in mm.



ITEM	DESCRIPTIONS	MATERIALS	REMARKS
1	Frame	Stainless steel, 3mm thk.	
2	Blade	Stainless steel, 4mm thk.	
3	Flange	Stainless steel, 4mm thk.	38mm for size $\leq 500\text{mm}$ (W or H), 50mm for size $> 500\text{mm}$ (W or H)
4	Bush	Teflon	
5	Packing housing	Stainless steel	
6	Packing housing cover	Stainless steel	
7	Blade seal	Silicon, 4.7mm thk.	Hardness, 50 Duro
8	Blade shaft	Stainless steel	$\varnothing 20$ for size $< 600\text{mm}$ (W), $\varnothing 25$ for size $\geq 600\text{mm}$ (W)
9	Stiffeners	Stainless steel, 3mm thk.	
10	Operator	Cast iron worm gear	
11	Bearing	Stainless steel with teflon insert	
12	Blade stopper	Stainless steel	
13	Operator mounting bracket	Stainless steel, 3mm thk.	
14	Packing	Teflon in square shape, 4 layers	6x6mm for $\varnothing 20$ blade shaft, 8x8mm for $\varnothing 25$ blade shaft

#### COATING FINISHES OPTIONS:

- ☐ None  
☐ Specify : \_\_\_\_\_

#### MATERIAL OPTIONS:

- ☐ Stainless Steel 304 (SUS304, 2B finish)  
☐ Stainless Steel 316 (SUS316L, 2B finish)

\*For other materials please consult factory.

#### DAMPER SIZE:

Min. size (W x H): 150 x 150mm

Max. size (W x H): 1300 x 1150mm

**TABLE 1:**

Nominal Height, H	Depth, D
150-399	200
400-549	250
550-749	300
750-949	350
950-1099	400
1100-1150	450

#### APPLICATION:

OLS isolation damper is designed for sealing off and/or controlling airflow in round, square/rectangle ducts and provides airtight seal to a differential pressure of 7000 Pa. In a biohazard environment, the dampers enable the air filter bank to be isolated for decontamination, and/or filter changing. A variety of sizes are available for a wide range of air flows.

#### CONSTRUCTION:

1. Frame is constructed of heavy gage stainless steel with flanges fully welded to both ends. Holes are pre-cut on the flanges with maximum distance (SP) of 75 mm.
2. Blade is double skin with stiffeners as required for higher blade strength.
3. Blade shaft is constructed of stainless steel. Diameter of blade axle is  $\varnothing 20\text{mm}$  or  $\varnothing 25\text{mm}$  depending on size.
4. Blade seal is constructed of silicon, 4.7mm thk. and is specially designed to provide tight seal when the blade is closed.
5. Shaft seal is constructed of comparison type packing gland continuously welded to damper frame; packing is made of Teflon material and will be replaced if necessary.
6. Flange dimension, C varies with damper size as required for higher structures strength.
7. Depth dimension, D varies with damper size (refer to Table 1) to prevent blade seal from rubbing against adjacent duct connection.

#### NOTE:

1. By standard, product is mill finished.

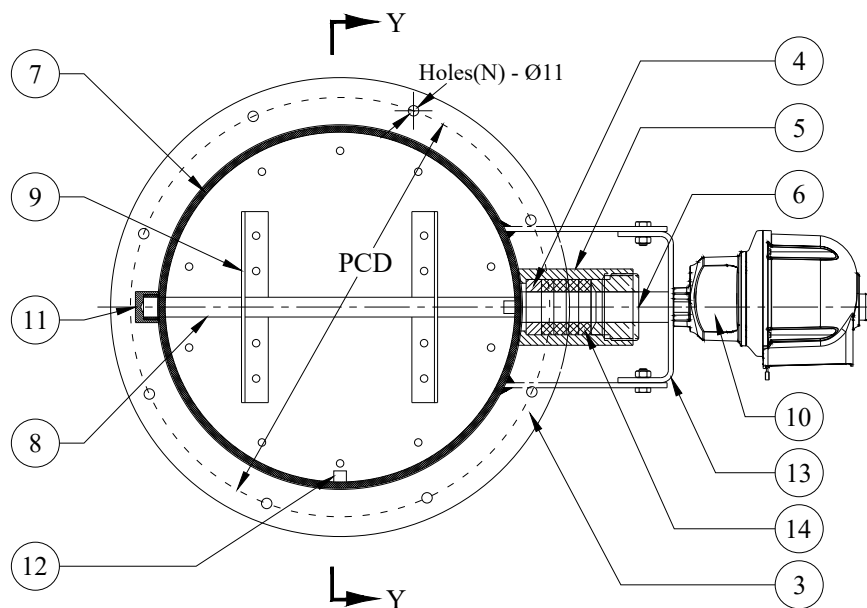
#### TYPICAL AREAS:

Hospital Isolation Units / Pharmaceutical Facilities / Microelectronic Sites / Food Processing / Laboratory Facilities / Industrial Process Exhaust Systems / Chemical Process Facilities / Animal Disease Laboratories / Nuclear Power Plants / HVAC Systems / Department of Energy Facilities / Military Facilities

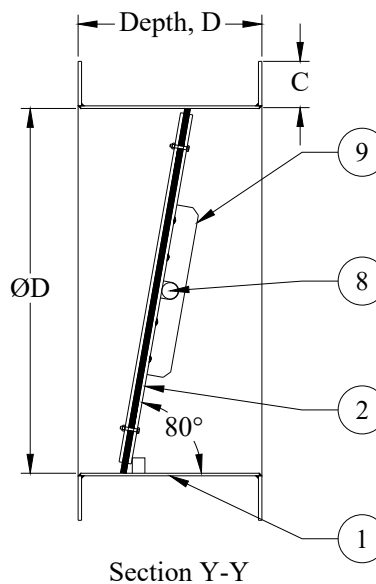
In the interest of product improvement, we reserved the right to make changes without notice.

All dimensions are in mm.

 <b>OLS MANUFACTURING CO.</b> 3-B, Joo Koon Circle, Singapore 629034 Tel.: 68615253 Fax.: 68619850 email: team.tvmsfd@connols-air.com http://www.connols-air.com	Title : <b>RECTANGULAR / SQUARE BUBBLE-TIGHT ISOLATION DAMPER WITH MANUAL HANDWHEEL GEAR DRIVE (MODEL DSS300-MG-SS)</b>  Project :	Dwn. By : San <i>Li</i>	Date : 13/10/2020	Scale :
		Chk. By : Yuxiang <i>Wong</i>	Dwg. No. : DCREP002-R4	N.T.S
		App. By : Wong <i>Wong</i>		



## Submittal



ITEM	DESCRIPTIONS	MATERIALS	REMARKS
1	Frame	Stainless steel, 3mm thk.	
2	Blade	Stainless steel, 4mm thk.	
3	Flange	Stainless steel, 4mm thk.	38mm for size ≤500mm, 50mm for size >500mm
4	Bush	Teflon	
5	Packing housing	Stainless steel	
6	Packing housing cover	Stainless steel	
7	Blade seal	Silicon, 4.0mm thk.	Hardness, 50 Duro
8	Blade shaft	Stainless steel	Ø20 for size <600mm, Ø25 for size ≥ 600mm
9	Stiffeners	Stainless steel, 3mm thk.	
10	Operator	Electric actuator	
11	Bearing	Stainless steel with teflon insert	
12	Blade stopper	Stainless steel	
13	Operator mounting bracket	Stainless steel, 3mm thk.	
14	Packing	Teflon in square shape, 4 layers	6x6mm for Ø20 blade shaft, 8x8mm for Ø25 blade shaft

### COATING FINISHES OPTIONS:

- ☐ None  
☐ Specify : \_\_\_\_\_

### MATERIAL OPTIONS:

- ☐ Stainless Steel 304 (SUS304, 2B finish)  
☐ Stainless Steel 316 (SUS316L, 2B finish)  
 \*For other materials please consult factory.

### ACTUATOR:

- ☐ On/Off electric  
☐ Modulating  
☐ Spring return

### DAMPER SIZE:

Min. size (ØD): Ø150mm  
 Max. size (ØD): Ø1150mm

**TABLE 1:**

Nominal Height, H	Depth, D
150-399	200
400-549	250
550-749	300
750-949	350
950-1099	400
1100-1150	450

### APPLICATION:

OLS isolation damper is designed for sealing off and/or controlling airflow in round, square/rectangle ducts and provides airtight seal to a differential pressure of 7000 Pa. In a biohazard environment, the dampers enable the air filter bank to be isolated for decontamination, and/or filter changing. A variety of sizes are available for a wide range of air flows.

### NOTE:

1. By standard, product is mill finished.

### TYPICAL AREAS:

Hospital Isolation Units / Pharmaceutical Facilities / Microelectronic Sites / Food Processing / Laboratory Facilities / Industrial Process Exhaust Systems / Chemical Process Facilities / Animal Disease Laboratories / Nuclear Power Plants / HVAC Systems / Department of Energy Facilities / Military Facilities

### CONSTRUCTION:

1. Frame is constructed of heavy gage stainless steel with flanges fully welded to both ends. Holes are pre-cut on the flanges with maximum distance (SP) of 75mm.
2. Blade is double skin with stiffeners as required for higher blade strength.
3. Blade shaft is constructed of stainless steel. Diameter of blade axle is Ø20mm or Ø25mm depending on size.
4. Blade seal is constructed of silicon, 4.0mm thk. and is specially designed to provide tight seal when the blade is closed.
5. Shaft seal is constructed of comparison type packing gland continuously welded to damper frame; packing is made of Teflon material and well be replaced if necessary.
6. Flange dimension, C varies with damper size as required for higher structures strength.
7. Depth dimension, D varies with damper size (refer to Table 1) to prevent blade seal from rubbing against adjacent duct connection.

In the interest of product improvement, we reserved the right to make changes without notice.

All dimensions are in mm.



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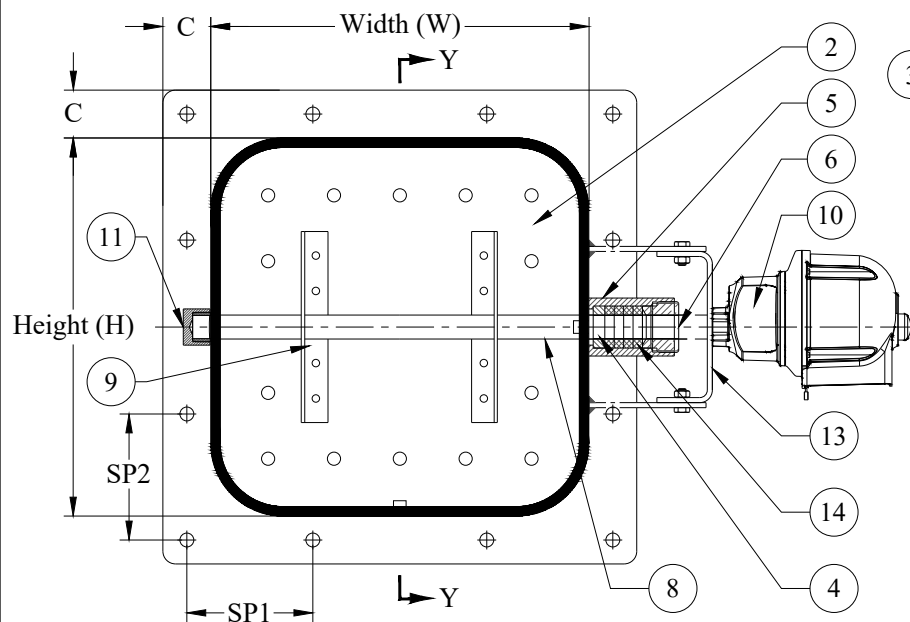
Tel.: 68615253 Fax.: 68619850

email: team.tvmsfd@connols-air.com http://www.connols-air.com

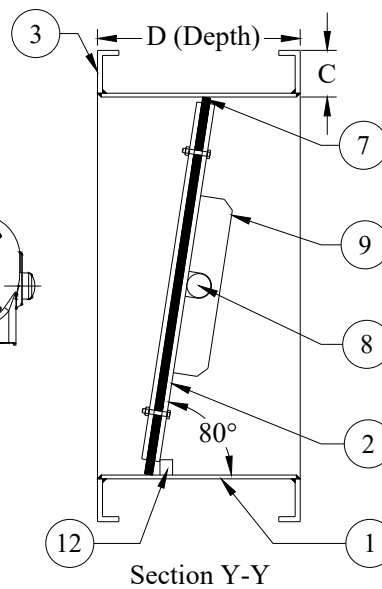
Title : **ROUND BUBBLE-TIGHT ISOLATION DAMPER WITH ELECTRIC DRIVE (MODEL DSR450-E)**

Project :

Dwn. By :	San	Date :	14/10/2020	Scale :
Chk. By :	Yuxiang			N.T.S
App. By :	Wong	Dwg. No. :	DCZEP001-R6	



## Submittal



Section Y-Y

ITEM	DESCRIPTIONS	MATERIALS	REMARKS
1	Frame	Stainless steel, 3mm thk.	
2	Blade	Stainless steel, 4mm thk.	
3	Flange	Stainless steel, 4mm thk.	38mm for size ≤500mm(W or H), 50mm for size >500mm(W or H)
4	Bush	Teflon	
5	Packing housing	Stainless steel	
6	Packing housing cover	Stainless steel	
7	Blade seal	Silicon, 4.0mm thk.	Hardness, 50 Duro
8	Blade shaft	Stainless steel	Ø20 for size < 600mm (W), Ø25 for size ≥ 600mm (W)
9	Stiffeners	Stainless steel, 3mm thk.	
10	Operator	Electric actuator	
11	Bearing	Stainless steel with teflon insert	
12	Blade stopper	Stainless steel	
13	Operator mounting bracket	Stainless steel, 3mm thk.	
14	Packing	Teflon in square shape, 4 layers	6x6mm for Ø20 blade shaft, 8x8mm for Ø25 blade shaft

### COATING FINISHES OPTIONS:

- ☐ None  
☐ Specify : \_\_\_\_\_

### MATERIAL OPTIONS:

- ☐ Stainless Steel 304 (SUS304, 2B finish)  
☐ Stainless Steel 316 (SUS316L, 2B finish)  
 \*For other materials please consult factory.

### ACTUATOR:

- ☐ On/Off electric  
☐ Modulating  
☐ Spring return

### DAMPER SIZE:

Min. size (W x H): 150 x 150mm  
 Max. size (W x H): 1300 x 1150mm

TABLE 1:

Nominal Height, H	Depth, D
150-399	200
400-549	250
550-749	300
750-949	350
950-1099	400
1100-1150	450

### APPLICATION:

OLS isolation damper is designed for sealing off and/or controlling airflow in round, square/rectangle ducts and provides airtight seal to a differential pressure of 7000 Pa. In a biohazard environment, the dampers enable the air filter bank to be isolated for decontamination, and/or filter changing. A variety of sizes are available for a wide range of air flows.

### NOTE:

1. By standard, product is mill finished.

### TYPICAL AREAS:

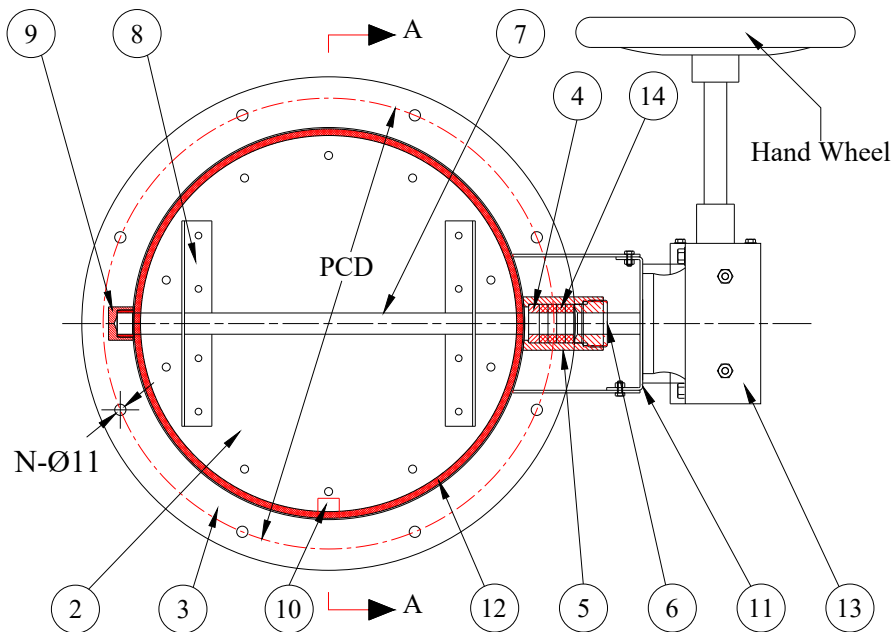
Hospital Isolation Units / Pharmaceutical Facilities / Microelectronic Sites / Food Processing / Laboratory Facilities / Industrial Process Exhaust Systems / Chemical Process Facilities / Animal Disease Laboratories / Nuclear Power Plants / HVAC Systems / Department of Energy Facilities / Military Facilities

### CONSTRUCTION:

- Frame is constructed of heavy gage stainless steel with flanges fully welded to both ends. Holes are pre-cut on the flanges with maximum distance (SP) of 75 mm.
- Blade is double skin with stiffeners as required for higher blade strength.
- Blade shaft is constructed of stainless steel. Diameter of blade axle is Ø20mm or Ø25mm depending on size.
- Blade seal is constructed of silicon, 4.0mm thk. and is specially designed to provide tight seal when the blade is closed.
- Shaft seal is constructed of comparison type packing gland continuously welded to damper frame; packing is made of Teflon material and well be replaced if necessary.
- Flange dimension, C varies with damper size as required for higher structures strength.
- Depth dimension, D varies with damper size (refer to Table 1) to prevent blade seal from rubbing against adjacent duct connection.

In the interest of product improvement, we reserved the right to make changes without notice.

All dimensions are in mm.



#### COATING FINISHES OPTIONS:

- ☐ None  
☐ Specify : \_\_\_\_\_

#### MATERIAL OPTIONS:

- ☐ Stainless Steel 304 (SUS304, 2B finish)  
☐ Stainless Steel 316 (SUS316L, 2B finish)  
☐ Galvanized Steel

\*For other materials please consult factory.

#### NOTE:

- If damper width or height is greater than 500mm the flange width C, will be 50mm, otherwise the flange width will be 38mm.
- By standard, product is mill finished.

#### DAMPER SIZE:

Min. size: Ø150mm  
 Max. size: Ø1150mm

**TABLE 2:**

Nominal Height, H	Depth, D
150-399	200
400-549	250
550-749	300
750-949	350
950-1099	400
1100-1150	450

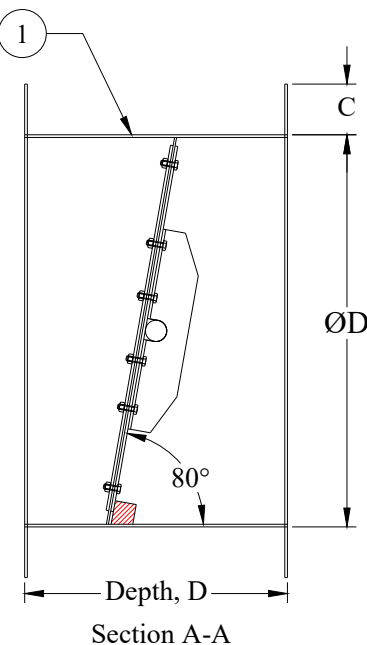
#### RATING:

- Internal leakage across the damper while closed, shall not exceed  $0.001 \text{ m}^3/\text{s/m}^2$  or  $1 \text{ l/s/m}^2$  at 2500Pa or less than 0.01% at 2500Pa based on 10m/s. There shall be no external leakage through the damper under all conditions.

#### CONSTRUCTION:

- Frame is constructed of heavy gage stainless steel with flanges fully welded to both ends. Holes are pre-cut on the flanges with maximum distance (SP) of 100mm.
- Blade is constructed of double skin with silicon rubber in between and stiffeners as required for higher blade strength.
- Blade shaft is constructed of stainless steel. Diameter of blade axle is Ø16mm, Ø20mm or Ø25mm depending on size.
- Blade seal is constructed of silicon, 1.5mm thk. and is specially designed to provide tight seal when the blade is closed.
- Shaft seal is constructed of comparison type packing gland continuously welded to damper frame; packing is made of Teflon material and well be replaced if necessary.
- Flange dimension, C varies with damper size as required for higher structure strength.
- Depth dimension, D varies with damper size (refer to Table 2) to prevent blade seal from rubbing against adjacent duct connection.

#### Submittal



ITEM	DESCRIPTIONS	MATERIALS	REMARKS
1	Frame	2-3mm thk.	Refer to Table 1
2	Blade	2.5-3mm thk.	Refer to Table 1
3	Flange	2.5-3mm thk.	38mm for size ≤500mm, 50mm for size >500mm
4	Bush	Teflon	
5	Packing housing	SUS304 / SUS316L	
6	Packing housing cover	SUS304 / SUS316L	
7	Blade shaft	SUS304 / SUS316L	Refer to Table 1
8	Stiffener	2-3mm thk.	Refer to Table 1
9	Bearing	With Teflon insert	
10	Stopper	Ø16-15mm	
11	Operator mounting bracket	2-3mm thk.	Refer to Table 1
12	Blade seal	Silicon rubber, 1.5mm thk.	
13	Operator	Cast iron worm gear	3D-15
14	Packing	Teflon in square shape, 4 layers	Refer to Table 1

NOTE : Refer to material options for item 1, 2, 3, 8, 9, 10 and 11.

**TABLE 1:**

Nominal Diameter, ØD	Frame thk	Stiffener thk	Blade thk	Flange thk	Mounting base thk	Blade shaft dia.	Packing
150-499	2	2	2.5	2.5	2	16	6 x 6
500-799	2	2	2.5	2.5	2	20	6 x 6
800-1150	3	3	3	3	3	25	8 x 8

In the interest of product improvement, we reserved the right to make changes without notice.

All dimensions are in mm.



**OLS MANUFACTURING CO.**

3-B, Joo Koon Circle, Singapore 629034

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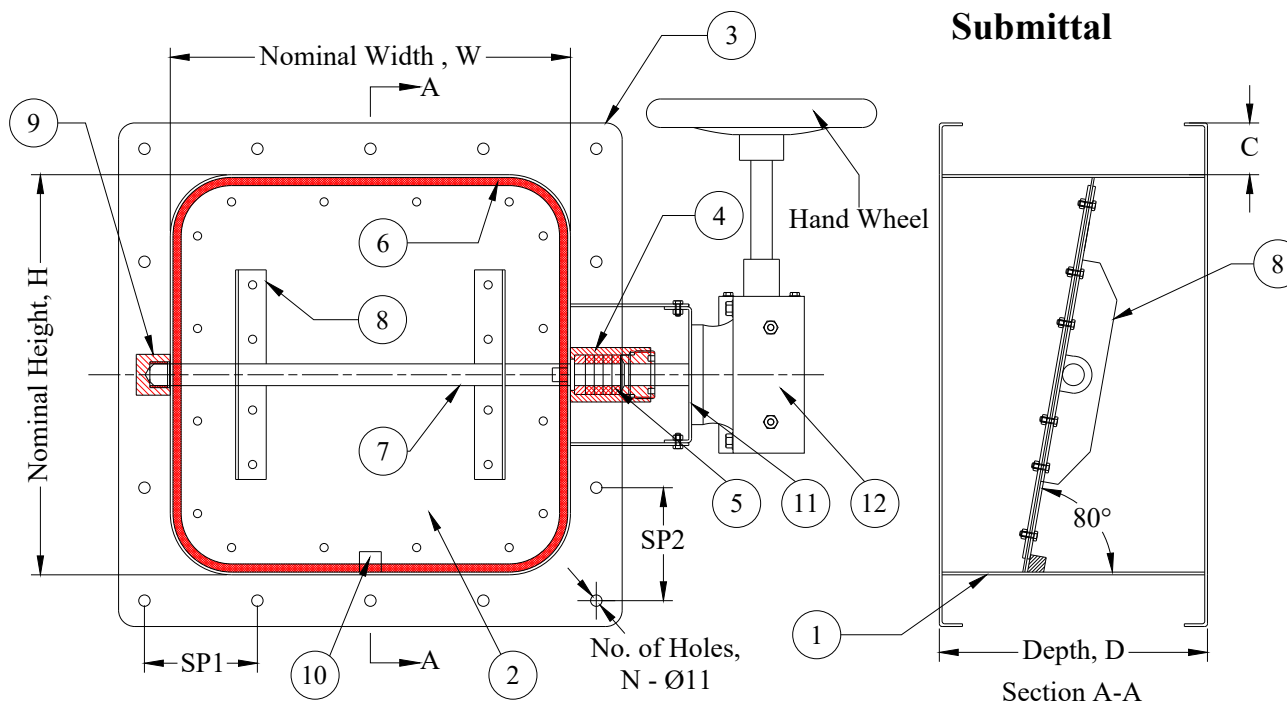
email: team.tvmsd@connols-air.com http://www.connols-air.com

Title : **CIRCULAR ULTRA-LOW LEAKAGE DAMPER WITH MANUAL HANDWHEEL GEAR DRIVE (MODEL DSR075-MG)**

Project :

Dwn. By :	San Jh	Date :	13/10/2020	Scale :
Chk. By :	Yuxiang			N.T.S
App. By :	Wong Jay	Dwg. No. :	DGREP001-R3	





#### COATING FINISHES OPTIONS:

- ☐ None  
☐ Specify : \_\_\_\_\_

#### MATERIAL OPTIONS:

- ☐ Stainless Steel 304 (SUS304, 2B finish)  
☐ Stainless Steel 316 (SUS316L, 2B finish)  
☐ Galvanized Steel

\*For other materials please consult factory.

#### DAMPER SIZE:

Min. size: 150mm x 150mm  
 Max. size: 1300mm x 1150mm single module; for large size, damper may be supplied by modules

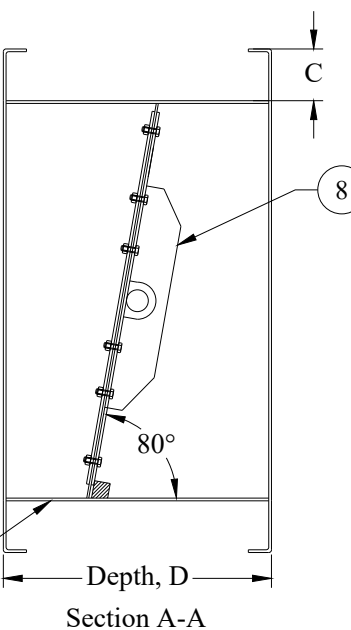
#### RATING:

1. Internal leakage across the damper while closed, shall not exceed  $0.001\text{m}^3/\text{s}/\text{m}^2$  or  $1\text{ l/s}/\text{m}^2$  at 2500Pa or less than  $0.01\%$  at 2500Pa based on 10m/s. There shall be no external leakage through the damper under all conditions.

#### NOTE:

1. If damper width or height is greater than 500mm the flange width C, will be 50mm, otherwise the flange width will be 38mm.
2. By standard, product is mill finished.

#### Submittal



ITEM	DESCRIPTIONS	MATERIALS	REMARKS
1	Frame	2-3mm thk.	Refer to Table 1
2	Blade	2.5-3mm thk.	Refer to Table 1
3	Flange	2.5-3mm thk.	38mm for size $\leq 500\text{mm}$ (W or H), 50mm for size $> 500\text{mm}$ (W or H)
4	Packing gland	SUS304 / SUS316L	
5	Packing	Teflon in square shape, 4 layers	Refer to Table 1
6	Blade seal	Silicon rubber, 1.5mm thk.	Hardness, 50 Duro
7	Blade shaft	SUS304 / SUS316L	Refer to Table 1
8	Stiffener	2-3mm thk.	Refer to Table 1
9	Bearing	With Teflon insert	
10	Stopper	Ø16-15mm	Refer to Table 1
11	Mounting base	2-3mm thk.	Refer to Table 1
12	Operator	Cast iron worm gear	

NOTE : Refer to material options for item 1, 2, 3, 8, 9, 10 and 11.

TABLE 1:

Nominal Diameter, ØD	Frame thk	Stiffener thk	Blade thk	Flange thk	Mounting base thk	Blade shaft dia.	Packing
150-499	2	2	2.5	2.5	2	16	6 x 6
500-799	2	2	2.5	2.5	2	20	6 x 6
800-1150	3	3	3	3	3	25	8 x 8

TABLE 2:

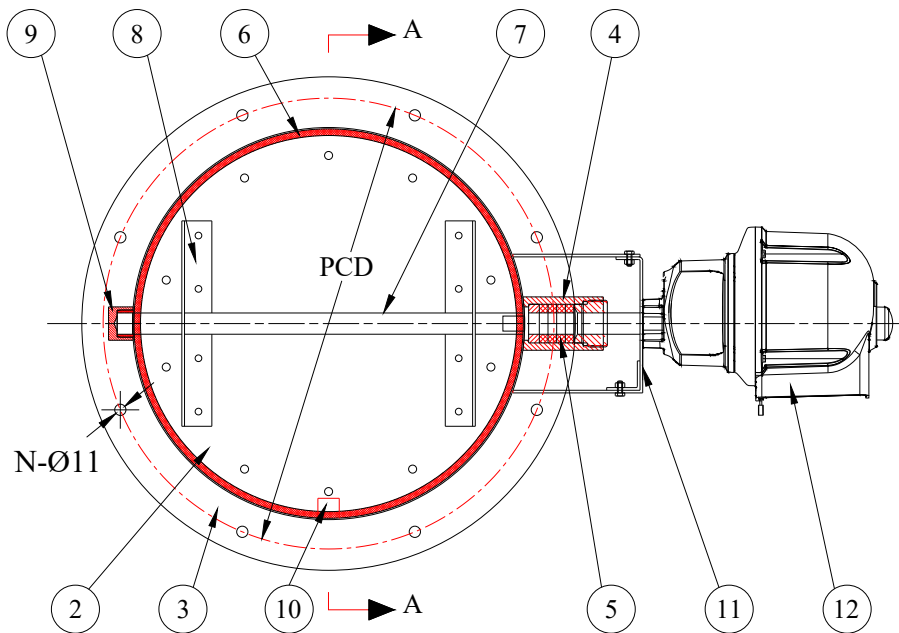
Nominal Height, H	Depth, D
150-399	200
400-549	250
550-749	300
750-949	350
950-1099	400
1100-1150	450

#### CONSTRUCTION:

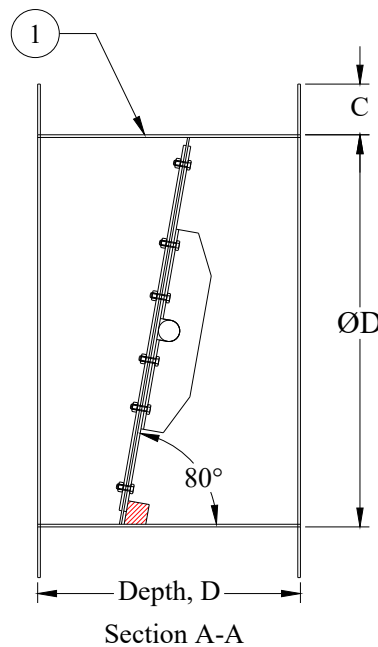
1. Frame is constructed of heavy gage stainless steel with flanges fully welded to both ends. Holes are pre-cut on the flanges with maximum distance (SP) of 100mm.
2. Blade is constructed of double skin with silicon rubber in between and stiffeners as required for higher blade strength.
3. Blade shaft is constructed of stainless steel. Diameter of blade axle is Ø16mm, Ø20mm or Ø25mm depending on size.
4. Blade seal is constructed of silicon, 1.5mm thk. and is specially designed to provide tight seal when the blade is closed.
5. Shaft seal is constructed of comparison type packing gland continuously welded to damper frame; packing is made of Teflon material and well be replaced if necessary.
6. Flange dimension, C varies with damper size as required for higher structure strength.
7. Depth dimension, D varies with damper size (refer to Table 2) to prevent blade seal from rubbing against adjacent duct connection.

All dimensions are in mm.

In the interest of product improvement, we reserved the right to make changes without notice.



### Submittal



#### COATING FINISHES OPTIONS:

- ☐ None  
☐ Specify : \_\_\_\_\_

#### MATERIAL OPTIONS:

- ☐ Stainless Steel 304 (SUS304, 2B finish)  
☐ Stainless Steel 316 (SUS316L, 2B finish)  
☐ Galvanized Steel  
 \*For other materials please consult factory.

#### ACTUATOR:

- ☐ On/Off electric  
☐ Modulating  
☐ Spring return

#### RATING:

1. Internal leakage across the damper while closed, shall not exceed  $0.001\text{m}^3/\text{s}/\text{m}^2$  or  $1\text{ l/s}/\text{m}^2$  at 2500Pa or less than 0.01% at 2500Pa based on 10m/s. There shall be no external leakage through the damper under all conditions.

#### NOTE:

1. If damper width or height is greater than 500mm the flange width C, will be 50mm, otherwise the flange width will be 38mm.  
 2. By standard, product is mill finished.

#### DAMPER SIZE:

Min. size: Ø150mm  
 Max. size: Ø1150mm

**TABLE 2:**

Nominal Height, H	Depth, D
150-399	200
400-549	250
550-749	300
750-949	350
950-1099	400
1100-1150	450

ITEM	DESCRIPTIONS	MATERIALS	REMARKS
1	Frame	2-3mm thk.	Refer to Table 1
2	Blade	2.5-3mm thk.	Refer to Table 1
3	Flange	2.5-3mm thk.	38mm for size $\leq 500\text{mm}$ , 50mm for size $> 500\text{mm}$
4	Packing gland	SUS304 / SUS316L	
5	Packing	Teflon in square shape, 4 layers	Refer to Table 1
6	Blade seal	Silicon rubber, 1.5mm thk.	Hardness, 50 Duro
7	Blade shaft	SUS304 / SUS316L	Refer to Table 1
8	Stiffener	2-3mm thk.	Refer to Table 1
9	Bearing	With Teflon insert	
10	Stopper	Ø16-25mm	Refer to Table 1
11	Mounting base	2-3mm thk.	Refer to Table 1
12	Operator	Electric Actuator	

NOTE : Refer to material options for item 1, 2, 3, 8, 9, 10 and 11.

**TABLE 1:**

Nominal Diameter, ØD	Frame thk	Stiffener thk	Blade thk	Flange thk	Mounting base thk	Blade shaft dia.	Packing
150-499	2	2	2.5	2.5	2	16	6 x 6
500-799	2	2	2.5	2.5	2	20	6 x 6
800-1150	3	3	3	3	3	25	8 x 8

#### CONSTRUCTION:

1. Frame is constructed of heavy gage stainless steel with flanges fully welded to both ends. Holes are pre-cut on the flanges with maximum distance (SP) of 100mm.
2. Blade is constructed of double skin with silicon rubber in between and stiffeners as required for higher blade strength.
3. Blade shaft is constructed of stainless steel. Diameter of blade axle is Ø16mm, Ø20mm or Ø25mm depending on size.
4. Blade seal is constructed of silicon, 1.5mm thk. and is specially designed to provide tight seal when the blade is closed.
5. Shaft seal is constructed of comparison type packing gland continuously welded to damper frame; packing is made of Teflon material and well be replaced if necessary.
6. Flange dimension, C varies with damper size as required for higher structure strength.
7. Depth dimension, D varies with damper size (refer to Table 2) to prevent blade seal from rubbing against adjacent duct connection.

In the interest of product improvement, we reserved the right to make changes without notice.

All dimensions are in mm.



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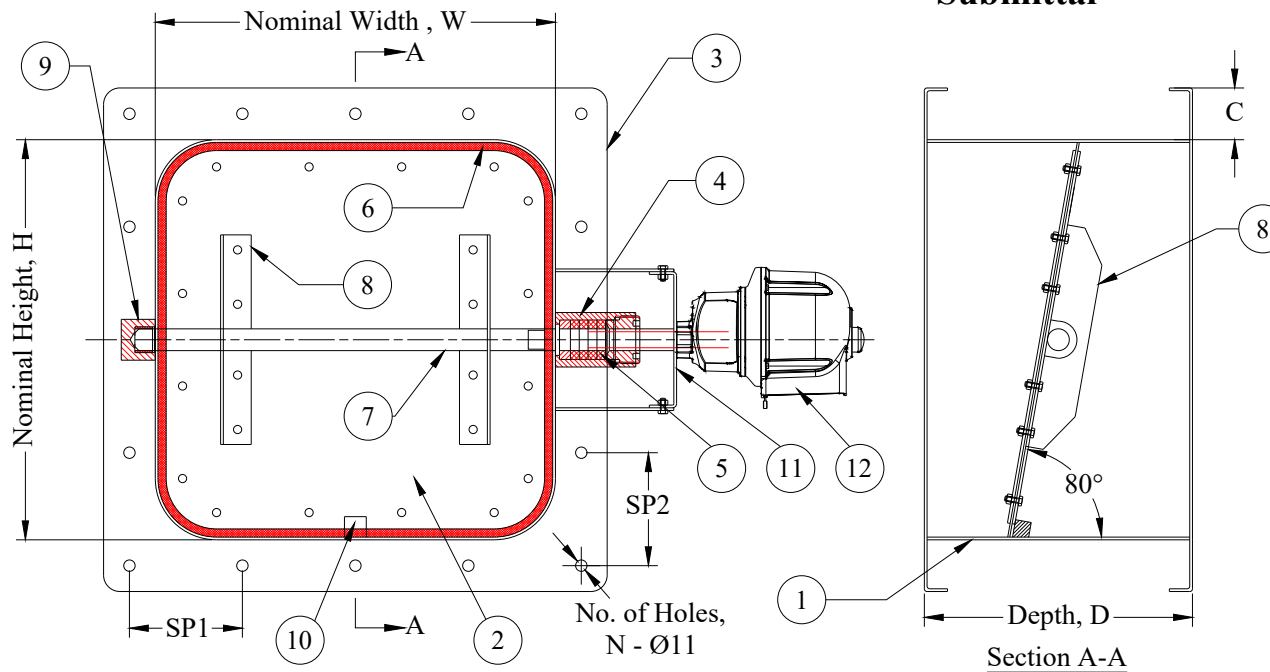
email: team.tvmsfd@connols-air.com http://www.connols-air.com

Title : **CIRCULAR ULTRA-LOW LEAKAGE DAMPER WITH ELECTRIC DRIVE (MODEL DSR075-E)**

Project :

Dwn. By :	San <i>Li</i>	Date :	13/10/2020	Scale :
Chk. By :	Yuxiang <i>Li</i>	Dwg. No. :	DGZEP003-R3	N.T.S
App. By :	Wong <i>Wong</i>			

## Submittal



### COATING FINISHES OPTIONS:

- ☐ None  
☐ Specify : \_\_\_\_\_

### MATERIAL OPTIONS:

- ☐ Stainless Steel 304 (SUS304, 2B finish)  
☐ Stainless Steel 316 (SUS316L, 2B finish)  
☐ Galvanized Steel  
 \*For other materials please consult factory.

### ACTUATOR:

- ☐ On/Off electric  
☐ Modulating  
☐ Spring return

### DAMPER SIZE:

Min. size: 150mm x 150mm  
 Max. size: 1300mm x 1150mm single module; for large size, damper may be supplied by modules

### RATING:

1. Internal leakage across the damper while closed, shall not exceed  $0.001\text{m}^3/\text{s}/\text{m}^2$  or  $1\text{ l/s}/\text{m}^2$  at 2500Pa or less than 0.01% at 2500Pa based on 10m/s. There shall be no external leakage through the damper under all conditions.

### NOTE:

1. If damper width or height is greater than 500mm the flange width C, will be 50mm, otherwise the flange width will be 38mm.  
 2. By standard, product is mill finished.

TABLE 2:

Nominal Height, H	Depth, D
150-399	200
400-549	250
550-749	300
750-949	350
950-1099	400
1100-1150	450

ITEM	DESCRIPTIONS	MATERIALS	REMARKS
1	Frame	2-3mm thk.	Refer to Table 1
2	Blade	2.5-3mm thk.	Refer to Table 1
3	Flange	2.5-3mm thk.	38mm for size $\leq 500\text{mm}$ (W or H), 50mm for size $> 500\text{mm}$ (W or H)
4	Packing gland	SUS304 / SUS316L	
5	Packing	Teflon in square shape, 4 layers	Refer to Table 1
6	Blade seal	Silicon rubber, 1.5mm thk.	Hardness, 50 Duro
7	Blade shaft	SUS304 / SUS316L	Refer to Table 1
8	Stiffener	2-3mm thk.	Refer to Table 1
9	Bearing	With Teflon insert	
10	Stopper	Ø16-25mm	Refer to Table 1
11	Mounting base	2-3mm thk.	Refer to Table 1
12	Operator	Electric actuator	

NOTE : Refer to material options for item 1, 2, 3, 8, 9, 10 and 11.

TABLE 1:

Nominal Diameter, ØD	Frame thk	Stiffener thk	Blade thk	Flange thk	Mounting base thk	Blade shaft dia.	Packing
150-499	2	2	2.5	2.5	2	16	6 x 6
500-799	2	2	2.5	2.5	2	20	6 x 6
800-1150	3	3	3	3	3	25	8 x 8

### CONSTRUCTION:

1. Frame is constructed of heavy gauge stainless steel with flanges fully welded to both ends. Holes are pre-cut on the flanges with maximum distance (SP) of 100mm.
2. Blade is constructed of double skin with silicon rubber in between and stiffeners as required for higher blade strength.
3. Blade shaft is constructed of stainless steel. Diameter of blade axle is Ø16mm, Ø20mm or Ø25mm depending on size.
4. Blade seal is constructed of silicon, 1.5mm thk. and is specially designed to provide tight seal when the blade is closed.
5. Shaft seal is constructed of comparison type packing gland continuously welded to damper frame; packing is made of Teflon material and well be replaced if necessary.
6. Flange dimension, C varies with damper size as required for higher structure strength.
7. Depth dimension, D varies with damper size (refer to Table 2) to prevent blade seal from rubbing against adjacent duct connection.

All dimensions are in mm.

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