

# SERIES DL

Drum

Louvres

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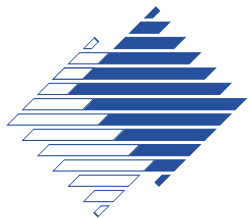


## Features

- High Capacity.
- Long Throw Air Distribution.
- Full Horizontal & Vertical Adjustment.
- Wide Size Range.
- Full Range of Volume Control Accessories.
- Extruded Aluminium Construction.



# GILBERTS



# SERIES DL

## Introduction

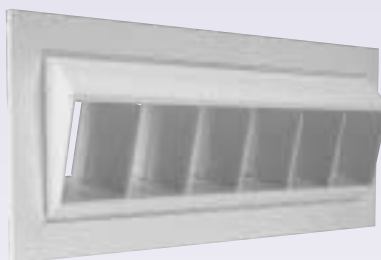
Gilberts Drum Louvre Series DL is a highly flexible and versatile unit that has been specifically developed to meet the requirements of the long throw application in the air distribution field. Capable of handling high air volumes the Drum Louvre can deliver a powerful stream of air with a wide variety of horizontal and vertical fields of coverage and velocities. This makes the unit ideal for spot cooling or heating applications such as in factories and process areas or for other difficult applications such as large theatres or auditoria.

Manufactured throughout from extruded aluminium the unit consists of a rotating Drum Assembly which rotates through + or - 30° for coverage in the vertical plane. This angular correction allows the rise and fall in the airstream, caused by temperature differentials between

supply and room air, to be offset as well as permitting both horizontal or vertical positioning. Individual blades housed in the drum can be adjusted independently to provide a jet or diffused airflow, reducing the length of throw with a corresponding equal terminal velocity. Attractively designed and styled the unit is available in 8 different sizes catering for volumes up to 2.0 m<sup>3</sup>/s. Standard accessories include separate volume controllers, which also act as deflectors /airturns or opposed blade dampers fixed directly to the rear of the drum. Units can also be supplied with 24v, or 240V Motors providing the facility to remotely rotate the drum for upward or downward distribution in accordance with a cooling or heating cycle.

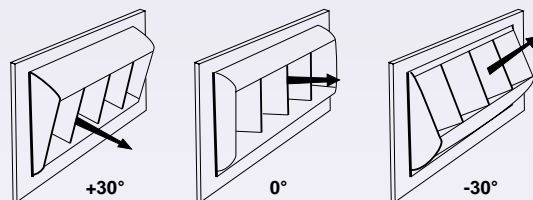
- TYPE DL:** Standard Drum Louvre available in sizes 1 to 8  
**TYPE DL/DO:** Drum Louvre complete with rear mounted, screwdriver operated opposed blade damper.  
**TYPE DL/VCC:** Drum Louvre complete with volume controller suitable for concealed ductwork.  
**TYPE DL/VCE:** Drum Louvre complete with volume controller suitable for exposed ductwork.

Standard finish for the Drum Louvre is a polyester powder white with other colours and finish types available on request.



## Features

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- Full Horizontal & Vertical Adjustment.
- Wide Size Range.
- Full Range of Volume Control Accessories.
- Extruded Aluminium Construction.



## Performance Data

The performance tables listed in this brochure relate to isothermal heating and cooling applications.

Performance figures for throw, pressure drop and also sound data under isothermal conditions can be found in the performance tables on pages 6, 7, 8, and 9.

Corresponding figures showing the rise and fall of the jet stream under heating and cooling conditions can be found in the rise and fall charts on pages 10, 11, 12, and 13, with angular corrections indicated on page 14.

Vertical performance under heating conditions are given on page 15, with angular variances calculated from figures given on page 16.

Vertical vane adjustment figures indicating percentage reduction in throws are also given on page 14.

### References Used

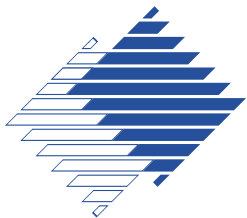
**PRESSURE:** All pressure are in Pa (N/m<sup>2</sup>)

**THROW:** All terminal velocity figures in (m/s) as indicated in the performance charts

**SOUND:** All figures given in (dbA)

## SELECTION PROCEDURE

Dependant upon the Drum Louvres positions worked examples on pages 2 and 16 will guide the designer in the use and selection procedures for either horizontal or vertical applications.



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## Selection Procedure

### HORIZONTAL THROW EXAMPLE (ISOTHERMAL CONDITIONS)

Air volume is  $0.425\text{m}^3/\text{s}$  and a throw of 18m is required with a terminal velocity of  $0.5\text{m}/\text{s}$ . Initially refer to the sizing charts on pages 6, 7, 8 and 9. Using air volume as your primary factor search for the closest air volume to your requirements in the left hand columns of the sizing chart tables. Each table refers to a specific Drum Louvre size (1 to 8) and you may find that more than one size can accommodate your air volume. Throw requirements can then be read off on the horizontal axis to reveal the unit with the closest terminal velocity to your needs.

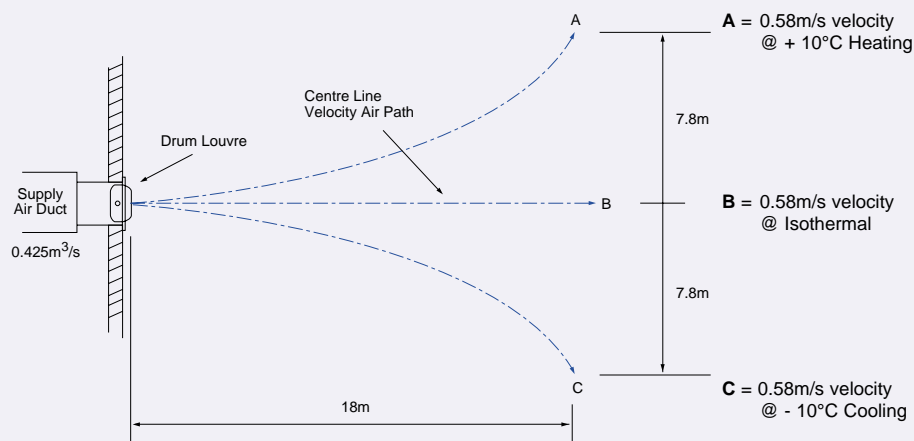
In this example size 4 Drum Louvre gives the closest match. At  $0.425\text{m}^3/\text{s}$  and an 18m throw the terminal velocity is  $0.58\text{m}/\text{s}$ . The table also indicates that at this volume the pressure drop will be 50 Pa and the noise level 33 dbA.

### HEATING AND COOLING ALLOWANCES

When a temperature difference between supply air and room air exists we can calculate the rise and fall of any airstream.

Using the initial data from our horizontal throw example we can add a temperature differential and determine the effect on performance. For example the effect of a temperature differential of  $10^\circ\text{C}$  heating or cooling can be calculated using our rise and fall charts on pages 10,

11, 12 and 13, (other temp. differentials are also listed). Reviewing our example size 4 Drum Louvre we can see from the Size 4 Rise and Fall chart on page 11 that for an air volume of  $0.425\text{m}^3/\text{s}$  at 18m throw and  $10^\circ\text{C}$  temp. differential the airstream will rise or fall by 7.8m (see diagram below).



### ANGULAR SETTING OF DRUM LOUVRES

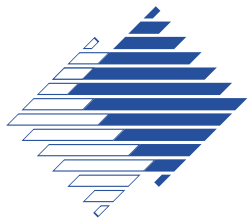
Once the throw is established we can use the angular discharge correction chart on page 14 to determine the vertical angular correction required on the drum position to achieve a horizontal throw. In our example at 18m throw we have a rise/fall effect of 7.8m. The nearest

factor available on the chart indicates that a  $23^\circ$  adjustment would correct a 7.2 rise/fall at 18m. From this we can estimate that a  $24^\circ$  angular adjustment would correct to near horizontal throw desired at 18m

### VANE SETTING (REDUCTION IN THROW)

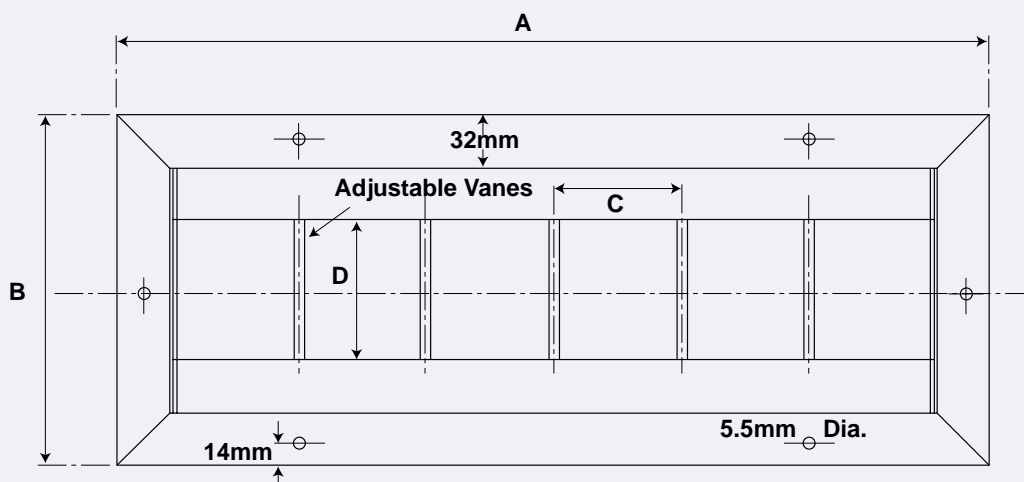
If the throw on the unit size selected is greater than that required, or if a wider jet/spread of air is required we can use the vertical vanes in the Drum Louvre to alter the airstream. The vane adjustment graph on page 16 indicates the percentage decrease in throw for any given

angle of vane deflection setting. Again using our example, if we required a 10% reduction in throw down to 16m we would adjust the angle of all vanes by  $5^\circ$ .

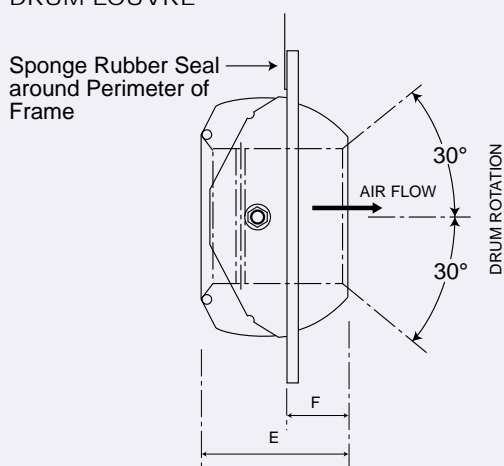


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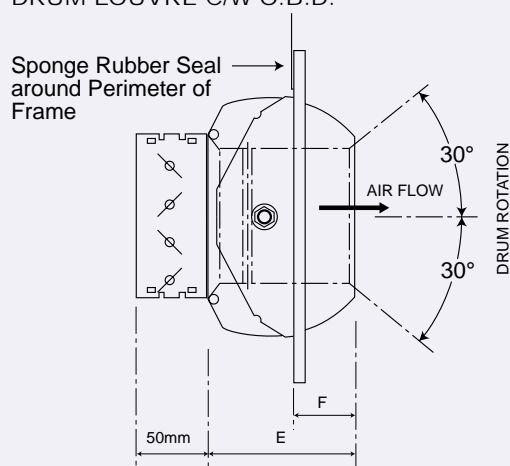
## Drum Louvre Dimensions



DRUM LOUVRE



DRUM LOUVRE C/W O.B.D.



DIMENSIONS (mm)

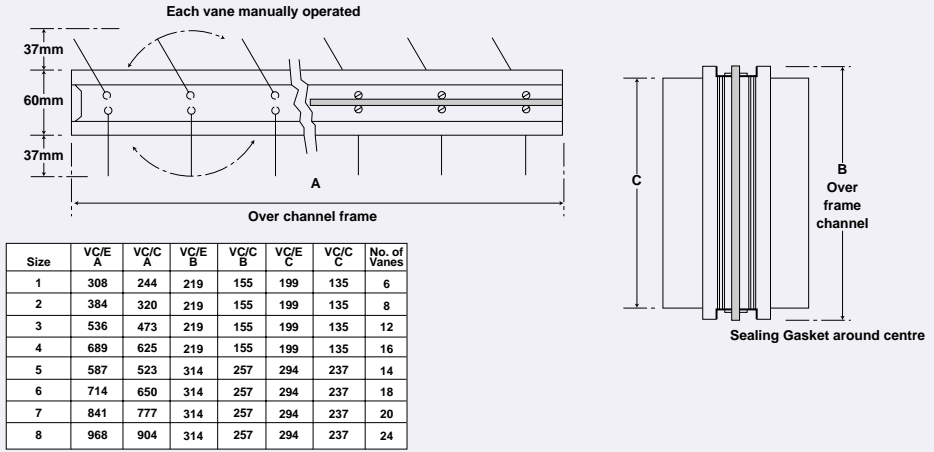
LIST SIZE	A	B	C	D	E	F	DUCT OPENING	No of Vanes	No of Screws	APPROX WEIGHT kg
1	297	208	76	85	90	35	246 x 157	2	6	1.25
2	373	208	76	85	90	35	322 x 157	3	6	1.59
3	525	208	76	85	90	35	475 x 157	5	10	2.13
4	678	208	76	85	90	35	627 x 157	7	10	2.73
5	576	303	127	150	150	59	525 x 259	3	10	3.89
6	703	303	127	150	150	59	652 x 259	4	10	4.68
7	830	303	127	150	150	59	779 x 259	5	14	5.44
8	957	303	127	150	150	59	906 x 259	6	14	6.44



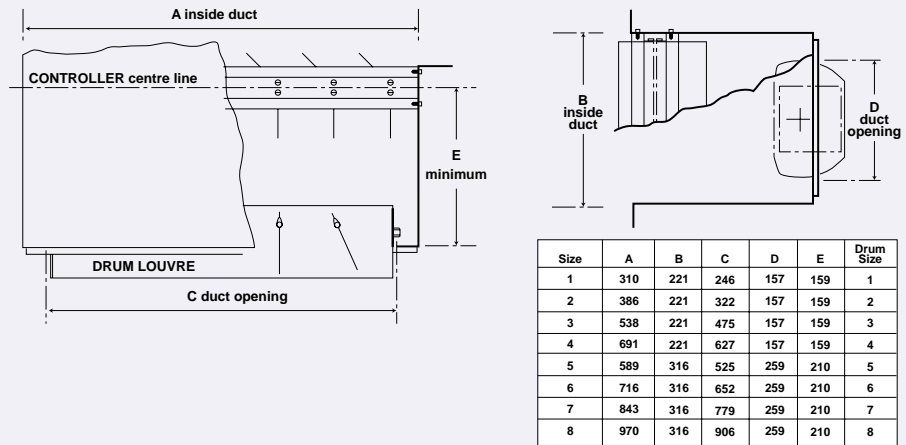
# SERIES DL

## Drum Louvre Dimensions

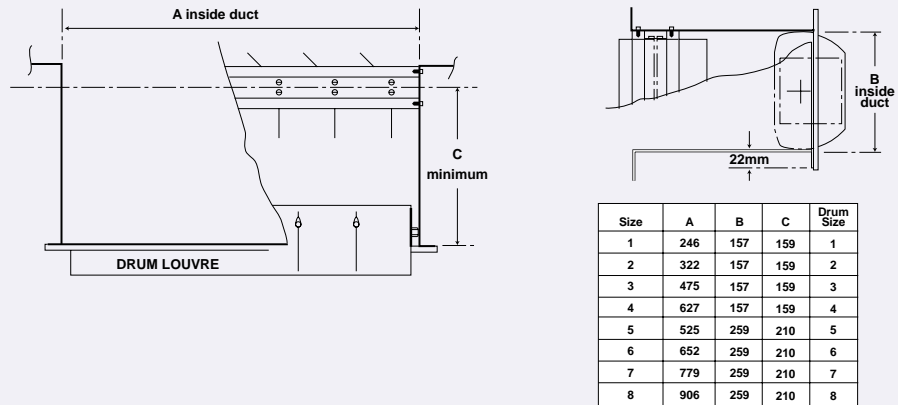
### Volume Controller



### Volume Controller for Exposed Ductwork ...Ref VCE



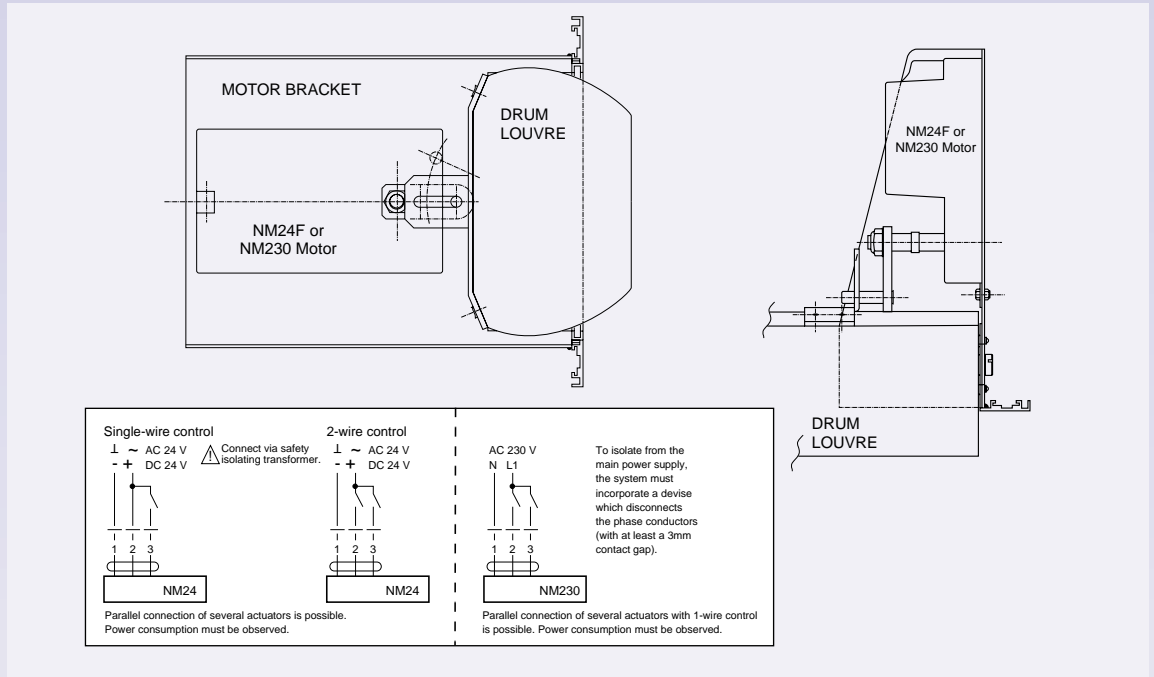
### Volume Controller for Concealed Ductwork ...Ref VCC





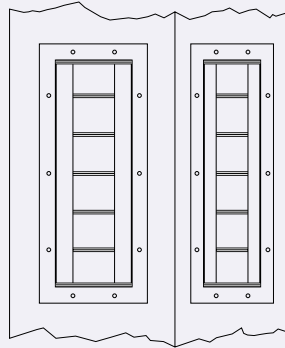
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## Drum Louvre Motorised



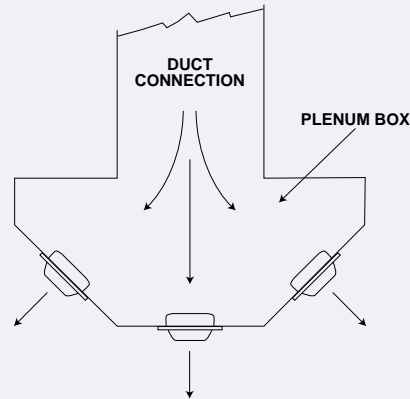
## Typical Applications and Installation Guidelines

### TYPICAL APPLICATIONS



### VERTICAL MOUNTING

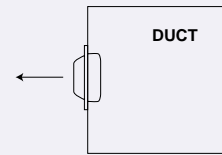
The drum louvre can be adapted to a vertical installation such as a combined decorative pillar and plenum around a structural column.



### MULTI-POINT SITUATIONS

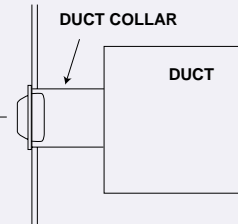
Purpose made plenum boxes can be constructed to accommodate multi-directional requirements.

### INSTALLATION GUIDELINES



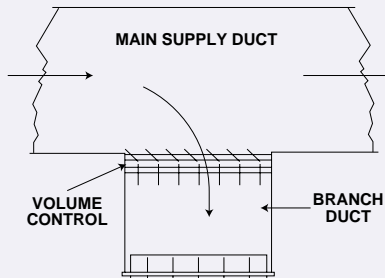
### VELOCITIES UP TO 5m/s

The drum louvre can be fixed directly to the ducting using self-tapping screws.



### VELOCITIES EXCEEDING 5m/s

In this situation it is recommended that an extension duct collar be fitted to the main ducting.



### POSITION REQUIRING VOLUME CONTROL

In many installations it is necessary to use a Volume Controller. This also acts as a Deflectrol, controlling air flow into the branch ducting. Details of our Volume controller can be found on page 4.



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## Drum Louvre Size 1

Vol in m <sup>3</sup> /s	Throw in metres								P.S. (Pa)	Sound (dBA)
	3	6	9	12	15	18	21	24		
	Residual Velocity (m/s)									
0.025	0.32	0.18	0.12	-	-	-	-	-	2	-
0.05	0.63	0.35	0.25	0.19	0.14	0.11	-	-	7	-
0.075	0.95	0.53	0.37	0.28	0.22	0.17	0.13	-	14	-
0.1	1.27	0.71	0.49	0.37	0.29	0.23	0.17	0.11	25	22
0.125	1.58	0.88	0.61	0.46	0.36	0.28	0.21	0.13	35	24
0.15	1.89	1.06	0.74	0.55	0.43	0.34	0.25	0.16	45	27
0.175	2.21	1.23	0.86	0.65	0.50	0.40	0.29	0.19	63	31
0.2	2.52	1.41	0.98	0.74	0.57	0.45	0.33	0.22	83	33
0.225	2.84	1.59	1.10	0.83	0.64	0.51	0.37	0.24	100	36
0.25	3.15	1.76	1.23	0.92	0.72	0.56	0.41	0.27	125	38
0.275	3.47	1.94	1.35	1.02	0.79	0.62	0.46	0.30	150	40

## Drum Louvre Size 2

Vol in m <sup>3</sup> /s	Throw in metres								P.S. (Pa)	Sound (dBA)
	3	6	9	12	15	18	21	24		
	Residual Velocity (m/s)									
0.025	0.29	0.16	0.10	-	-	-	-	-	1	-
0.05	0.54	0.30	0.21	0.16	0.12	0.10	-	-	3	-
0.075	0.81	0.46	0.32	0.24	0.19	0.15	0.11	-	5	-
0.1	1.08	0.61	0.42	0.32	0.25	0.20	0.14	-	11	-
0.125	1.35	0.76	0.53	0.40	0.31	0.24	0.18	0.12	18	21
0.15	1.62	0.91	0.64	0.48	0.37	0.29	0.21	0.14	24	23
0.175	1.89	1.06	0.74	0.56	0.43	0.34	0.25	0.16	30	24
0.2	2.16	1.22	0.85	0.64	0.49	0.39	0.29	0.18	40	28
0.225	2.42	1.37	0.95	0.72	0.56	0.44	0.32	0.21	50	30
0.25	2.69	1.52	1.06	0.80	0.62	0.49	0.36	0.23	63	32
0.275	2.96	1.67	1.16	0.88	0.68	0.53	0.39	0.25	75	34
0.3	3.23	1.82	1.27	0.95	0.74	0.58	0.43	0.27	90	36
0.325	3.50	1.98	1.38	1.03	0.80	0.63	0.46	0.30	100	37
0.35	3.77	2.13	1.48	1.11	0.86	0.68	0.50	0.32	120	39
0.375	4.04	2.28	1.59	1.19	0.93	0.73	0.53	0.34	150	42

## Drum Louvre Size 3

Vol in m <sup>3</sup> /s	Throw in metres								P.S. (Pa)	Sound (dBA)
	3	6	9	12	15	18	21	24		
	Residual Velocity (m/s)									
0.075	0.65	0.37	0.26	0.20	0.15	0.12	-	-	3	-
0.1	0.86	0.50	0.35	0.26	0.20	0.16	0.12	-	5	-
0.125	1.08	0.62	0.43	0.33	0.25	0.20	0.15	-	8	-
0.15	1.29	0.75	0.52	0.39	0.30	0.24	0.18	0.11	11	-
0.175	1.51	0.87	0.61	0.46	0.35	0.28	0.20	0.13	15	21
0.2	1.72	1.00	0.69	0.52	0.40	0.32	0.23	0.15	20	23
0.225	1.94	1.12	0.78	0.59	0.45	0.36	0.26	0.17	25	24
0.25	2.15	1.24	0.87	0.65	0.50	0.40	0.29	0.19	30	26
0.275	2.37	1.37	0.95	0.72	0.55	0.44	0.32	0.21	38	29
0.3	2.59	1.49	1.04	0.78	0.60	0.48	0.35	0.22	43	30
0.325	2.80	1.62	1.13	0.84	0.66	0.52	0.38	0.24	50	32
0.35	3.02	1.74	1.21	0.91	0.71	0.55	0.41	0.26	60	33
0.375	3.23	1.87	1.30	0.97	0.76	0.59	0.44	0.28	75	36
0.4	3.45	1.99	1.39	1.04	0.81	0.63	0.47	0.30	79	37
0.425	3.66	2.11	1.47	1.10	0.86	0.67	0.49	0.32	93	38
0.45	3.88	2.24	1.56	1.17	0.91	0.71	0.52	0.34	101	39
0.475	4.09	2.36	1.64	1.23	0.96	0.75	0.55	0.35	112	40
0.5	4.31	2.49	1.73	1.30	1.01	0.79	0.58	0.37	138	42
0.525	4.52	2.61	1.82	1.36	1.06	0.83	0.61	0.39	150	43
0.55	4.74	2.74	1.90	1.43	1.11	0.87	0.64	0.41	163	44



# SERIES DL

## Drum Louvre Size 4

Vol in m <sup>3</sup> /s	Throw in metres								S.P. (Pa)	Sound (dBA)
	3	6	9	12	15	18	21	24		
Residual Velocity (m/s)										
0.075	0.55	0.32	0.23	0.17	0.13	0.10	-	-	1	-
0.1	0.73	0.43	0.30	0.23	0.17	0.14	0.10	-	2	-
0.125	0.91	0.54	0.38	0.28	0.22	0.17	0.13	-	4	-
0.15	1.09	0.65	0.45	0.34	0.26	0.21	0.15	0.10	5	-
0.175	1.28	0.76	0.53	0.39	0.31	0.24	0.18	0.11	7	-
0.2	1.46	0.87	0.60	0.45	0.35	0.27	0.20	0.13	10	-
0.225	1.64	0.97	0.68	0.51	0.39	0.31	0.28	0.15	13	20
0.25	1.82	1.08	0.75	0.56	0.44	0.34	0.25	0.16	16	21
0.275	2.00	1.19	0.83	0.62	0.48	0.38	0.28	0.18	19	23
0.3	2.19	1.30	0.90	0.68	0.52	0.41	0.30	0.20	23	24
0.325	2.37	1.41	0.98	0.73	0.57	0.45	0.33	0.21	25	27
0.35	2.55	1.51	1.05	0.79	0.61	0.48	0.35	0.23	35	29
0.375	2.73	1.62	1.13	0.85	0.65	0.51	0.38	0.24	40	31
0.4	2.91	1.73	1.20	0.90	0.70	0.55	0.40	0.26	44	32
0.425	3.10	1.84	1.28	0.96	0.74	0.58	0.43	0.28	50	33
0.45	3.28	1.95	1.35	1.01	0.78	0.62	0.45	0.29	55	34
0.475	3.46	2.06	1.43	1.07	0.83	0.65	0.48	0.31	61	35
0.5	3.64	2.16	1.51	1.13	0.87	0.69	0.50	0.32	70	38
0.525	3.82	2.27	1.58	1.18	0.92	0.72	0.53	0.34	78	38
0.55	4.01	2.38	1.66	1.24	0.96	0.75	0.55	0.36	84	39
0.575	4.18	2.49	1.73	1.30	1.00	0.79	0.58	0.37	90	41

## Drum Louvre Size 5

Vol in m <sup>3</sup> /s	Throw in metres										S.P. (Pa)	Sound (dBA)
	3	6	9	12	15	18	21	24	30	36		
Residual Velocity (m/s)												
0.1	0.62	0.35	0.24	0.18	0.14	0.11	-	-	-	-	2	-
0.15	0.92	0.52	0.36	0.27	0.21	0.17	0.12	-	-	-	4	-
0.2	1.23	0.70	0.49	0.37	0.28	0.22	0.16	0.11	-	-	7	22
0.25	1.54	0.87	0.61	0.46	0.35	0.28	0.20	0.13	-	-	10	24
0.3	1.85	1.04	0.73	0.55	0.43	0.33	0.24	0.16	-	-	14	26
0.35	2.15	1.22	0.85	0.64	0.50	0.39	0.29	0.18	-	-	18	28
0.4	2.46	1.39	0.97	0.73	0.57	0.45	0.33	0.21	-	-	23	29
0.45	2.77	1.57	1.09	0.82	0.64	0.50	0.37	0.23	-	-	29	31
0.5	3.08	1.74	1.21	0.91	0.71	0.56	0.41	0.26	-	-	35	32
0.55	3.38	1.91	1.33	1.00	0.78	0.61	0.45	0.29	-	-	43	34
0.6	3.69	2.09	1.45	1.09	0.85	0.67	0.49	0.31	-	-	50	35
0.65	3.99	2.26	1.58	1.19	0.92	0.72	0.53	0.34	-	-	56	37
0.7	4.31	2.44	1.70	1.28	0.99	0.78	0.57	0.37	-	-	64	38
0.75	4.62	2.61	1.82	1.37	1.06	0.83	0.61	0.39	0.10	-	73	39
0.8	4.92	2.79	1.94	1.46	1.13	0.89	0.65	0.42	0.10	-	81	40
0.85	5.23	2.96	2.06	1.55	1.20	0.95	0.69	0.44	0.11	-	90	41
0.9	5.54	3.13	2.18	1.64	1.28	1.00	0.73	0.47	0.11	-	100	42
0.95	5.85	3.31	2.31	1.74	1.35	1.06	0.77	0.49	0.12	-	112	43
1	6.15	3.48	2.43	1.83	1.42	1.11	0.81	0.52	0.13	-	120	44



# SERIES DL

## Drum Louvre Size 6

Vol in m <sup>3</sup> /s	Throw in metres										S.P. (Pa)	Sound (dBA)
	3	6	9	12	15	18	21	24	30	36		
	Residual Velocity (m/s)											
0.15	0.80	0.47	0.33	0.25	0.19	0.15	0.11	-	-	-	3	-
0.2	1.07	0.63	0.44	0.33	0.26	0.20	0.15	0.10	-	-	5	-
0.25	1.34	0.78	0.55	0.41	0.32	0.25	0.18	0.12	-	-	7	-
0.3	1.61	0.94	0.66	0.49	0.38	0.30	0.22	0.14	-	-	10	20
0.35	1.88	1.10	0.77	0.58	0.45	0.35	0.26	0.17	-	-	13	23
0.4	2.14	1.25	0.87	0.66	0.51	0.40	0.29	0.19	-	-	16	25
0.45	2.41	1.41	0.98	0.74	0.57	0.45	0.33	0.21	-	-	20	27
0.5	2.68	1.57	1.09	0.82	0.64	0.50	0.37	0.24	-	-	25	28
0.55	2.95	1.72	1.20	0.90	0.70	0.55	0.40	0.26	-	-	29	31
0.6	3.21	1.88	1.31	0.98	0.76	0.60	0.44	0.28	-	-	33	32
0.65	3.48	2.03	1.42	1.07	0.83	0.65	0.48	0.31	-	-	38	33
0.7	3.75	2.19	1.53	1.15	0.89	0.70	0.51	0.33	-	-	44	34
0.75	4.02	2.35	1.64	1.23	0.96	0.75	0.55	0.35	-	-	50	36
0.8	4.29	2.51	1.75	1.31	1.02	0.80	0.59	0.38	-	-	56	37
0.85	4.55	2.66	1.86	1.40	1.08	0.85	0.62	0.40	0.10	-	63	38
0.9	4.82	2.82	1.97	1.48	1.15	0.90	0.66	0.42	0.11	-	70	39
0.95	5.09	2.98	2.08	1.56	1.21	0.95	0.69	0.45	0.11	-	75	39
1	5.36	3.13	2.19	1.64	1.27	1.00	0.73	0.47	0.12	-	84	43
1.05	5.63	3.29	2.30	1.72	1.34	1.05	0.77	0.49	0.12	-	92	45
1.1	5.89	3.45	2.40	1.81	1.40	1.10	0.80	0.52	0.13	-	100	47
1.15	6.16	3.60	2.51	1.89	1.46	1.15	0.84	0.54	0.13	-	110	48
1.2	6.43	3.76	2.62	1.97	1.53	1.20	0.88	0.56	0.14	-	121	49
1.25	6.70	3.91	2.73	2.05	1.59	1.25	0.91	0.58	0.14	-	130	50
1.3	6.96	4.07	2.84	2.13	1.65	1.30	0.95	0.61	0.15	-	141	51

## Drum Louvre Size 7

Vol in m <sup>3</sup> /s	Throw in metres										S.P. (Pa)	Sound (dBA)
	3	6	9	12	15	18	21	24	30	36		
	Residual Velocity (m/s)											
0.15	0.70	0.43	0.30	0.23	0.18	0.14	0.10	-	-	-	2	-
0.2	0.94	0.58	0.40	0.30	0.23	0.18	0.14	-	-	-	3	-
0.25	1.17	0.72	0.50	0.38	0.29	0.23	0.17	0.11	-	-	5	-
0.3	1.41	0.86	0.60	0.45	0.35	0.28	0.20	0.13	-	-	7	21
0.35	1.64	1.00	0.70	0.53	0.41	0.32	0.24	0.15	-	-	9	22
0.4	1.87	1.15	0.80	0.60	0.47	0.37	0.27	0.18	-	-	11	24
0.45	2.11	1.29	0.90	0.68	0.53	0.41	0.30	0.20	-	-	14	26
0.5	2.34	1.44	1.00	0.75	0.58	0.46	0.34	0.22	-	-	18	27
0.55	2.58	1.58	1.11	0.83	0.64	0.51	0.37	0.24	-	-	21	28
0.6	2.81	1.72	1.21	0.91	0.70	0.55	0.41	0.26	-	-	25	29
0.65	3.04	1.87	1.31	0.98	0.76	0.60	0.44	0.28	-	-	28	31
0.7	3.28	2.01	1.41	1.06	0.82	0.64	0.47	0.31	-	-	33	32
0.75	3.51	2.15	1.51	1.13	0.88	0.69	0.51	0.33	-	-	38	34
0.8	3.75	2.30	1.61	1.21	0.94	0.74	0.54	0.35	-	-	42	35
0.85	3.98	2.44	1.71	1.28	0.99	0.78	0.57	0.37	-	-	47	36
0.9	4.22	2.59	1.81	1.36	1.05	0.83	0.61	0.39	0.10	-	52	37
0.95	4.45	2.73	1.91	1.43	1.11	0.87	0.64	0.41	0.11	-	58	38
1	4.69	2.87	2.01	1.51	1.17	0.92	0.67	0.43	0.11	-	63	38
1.05	4.92	3.02	2.11	1.58	1.23	0.96	0.71	0.46	0.12	-	69	39
1.1	5.15	3.16	2.21	1.66	1.29	1.01	0.74	0.48	0.12	-	75	40
1.15	5.39	3.30	2.31	1.74	1.34	1.06	0.77	0.50	0.13	-	72	41
1.2	5.62	3.45	2.41	1.81	1.40	1.10	0.81	0.52	0.13	-	80	42
1.25	5.86	3.59	2.51	1.89	1.46	1.15	0.84	0.54	0.14	-	85	43
1.3	6.09	3.73	2.61	1.96	1.52	1.19	0.87	0.56	0.14	-	93	44
1.35	6.32	3.88	2.71	2.04	1.58	1.24	0.91	0.58	0.15	-	105	45
1.4	6.56	4.02	2.81	2.11	1.64	1.28	0.94	0.61	0.15	-	117	46
1.45	6.79	4.16	2.91	2.19	1.69	1.33	0.97	0.63	0.16	-	120	47
1.5	7.03	4.31	3.01	2.26	1.75	1.38	1.01	0.65	0.16	-	130	47
1.55	7.26	4.45	3.12	2.34	1.81	1.42	1.04	0.67	0.17	-	135	48
1.6	7.5	4.59	3.22	2.41	1.87	1.47	1.08	0.69	0.17	-	150	49
1.65	7.73	4.74	3.32	2.49	1.93	1.51	1.11	0.71	0.18	-	160	49



# SERIES DL

## Drum Louvre Size 8

Vol in m <sup>3</sup> /s	Throw in metres										S.P. (Pa)	Sound (dBA)
	3	6	9	12	15	18	21	24	30	36		
	Residual Velocity (m/s)											
0.200	0.82	0.53	0.38	0.28	0.22	0.17	0.13	-	-	-	2	-
0.250	1.03	0.66	0.47	0.35	0.27	0.22	0.16	0.10	-	-	3	-
0.300	1.23	0.80	0.56	0.42	0.33	0.26	0.19	0.12	-	-	4	20
0.350	1.44	0.93	0.66	0.49	0.38	0.30	0.22	0.14	-	-	5	22
0.400	1.64	1.06	0.75	0.56	0.44	0.34	0.25	0.16	-	-	7	23
0.450	1.85	1.20	0.84	0.63	0.49	0.39	0.28	0.18	0.10	-	9	25
0.500	2.05	1.33	0.94	0.70	0.54	0.43	0.32	0.21	0.11	-	11	26
0.550	2.26	1.46	1.03	0.77	0.60	0.47	0.35	0.23	0.12	-	13	26
0.600	2.47	1.59	1.12	0.84	0.65	0.51	0.38	0.25	0.13	-	16	27
0.650	2.67	1.73	1.22	0.91	0.71	0.56	0.41	0.27	0.15	-	19	29
0.700	2.88	1.86	1.31	0.98	0.76	0.60	0.44	0.29	0.16	-	22	30
0.750	3.08	1.99	1.41	1.06	0.82	0.64	0.47	0.31	0.17	-	25	31
0.800	3.29	2.13	1.50	1.13	0.87	0.69	0.50	0.33	0.18	-	28	32
0.850	3.49	2.26	1.59	1.20	0.93	0.73	0.54	0.35	0.19	-	33	33
0.900	3.69	2.39	1.69	1.27	0.98	0.77	0.57	0.37	0.20	0.10	36	34
0.950	3.90	2.52	1.78	1.34	1.03	0.81	0.60	0.39	0.21	0.10	38	35
1.000	4.11	2.66	1.87	1.41	1.09	0.86	0.63	0.41	0.22	0.11	44	36
1.050	4.31	2.79	1.96	1.48	1.14	0.90	0.66	0.43	0.23	0.11	48	36
1.100	4.52	2.92	2.06	1.55	1.20	0.94	0.69	0.45	0.25	0.12	53	37
1.150	4.73	3.05	2.15	1.62	1.25	0.98	0.72	0.47	0.26	0.12	59	38
1.200	4.93	3.19	2.25	1.69	1.31	1.03	0.75	0.49	0.27	0.13	62	39
1.250	5.14	3.32	2.34	1.76	1.36	1.07	0.79	0.51	0.28	0.13	68	40
1.300	5.34	3.45	2.44	1.83	1.41	1.11	0.82	0.53	0.29	0.13	73	41
1.350	5.55	3.59	2.53	1.90	1.47	1.15	0.85	0.55	0.30	0.14	79	42
1.400	5.75	3.72	2.62	1.97	1.52	1.20	0.88	0.57	0.31	0.14	86	43
1.450	5.96	3.85	2.72	2.04	1.58	1.24	0.91	0.59	0.32	0.15	92	43
1.500	6.16	3.98	2.81	2.11	1.63	1.28	0.94	0.61	0.33	0.15	98	44
1.550	6.37	4.12	2.90	2.18	1.69	1.32	0.97	0.63	0.34	0.16	104	45
1.600	6.57	4.25	3.00	2.25	1.74	1.37	1.00	0.65	0.35	0.16	108	45
1.650	6.78	4.38	3.09	2.32	1.79	1.41	1.04	0.67	0.36	0.17	115	46
1.700	6.98	4.51	3.18	2.39	1.85	1.45	1.07	0.69	0.38	0.17	125	47
1.750	7.19	4.64	3.28	2.46	1.90	1.50	1.10	0.71	0.39	0.18	132	48
1.800	7.40	4.78	3.37	2.53	1.96	1.54	1.13	0.73	0.40	0.18	140	49
1.850	7.60	4.91	3.46	2.60	2.01	1.58	1.16	0.75	0.41	0.19	145	50
1.900	7.80	5.04	3.56	2.67	2.07	1.62	1.19	0.77	0.42	0.19	155	51
1.950	8.01	5.18	3.65	2.74	2.12	1.66	1.22	0.79	0.43	0.20	165	52
2.000	8.22	5.31	3.74	2.81	2.17	1.71	1.26	0.81	0.44	0.20	172	52



# SERIES DL

## Drum Louvre Rise & Fall Charts

UNIT SIZE 2

VOLUME m <sup>3</sup> /s	TEMP Diff °C	THROW METRES →	3	6	9	12	15	18	21
<b>0.075</b>	5	RISE	300	1950	7050				
	10	OR	550	5130					
	15	FALL	1050	8030					
<b>0.1</b>	5	RISE	130	1000	3250	7550			
	10	OR	320	2450	7800				
	15	FALL	540	4000					
<b>0.125</b>	5	RISE	110	530	1870	4700	7850		
	10	OR	210	1300	4770				
	15	FALL	300	2200	7710				
<b>0.15</b>	5	RISE	90	330	580	2870	5600	8300	
	10	OR	180	800	2790	7050			
	15	FALL	220	1300	4880				
<b>0.175</b>	5	RISE	300	300	850	1800	3450	6050	
	10	OR	110	550	1960	4600	8470		
	15	FALL	170	1050	3100	7650			
<b>0.2</b>	5	RISE	300	300	990	2400	4500	7200	
	10	OR	90	600	1890	4500			
	15	FALL	120	900	3000	6300			
<b>0.225</b>	5	RISE	30	210	780	1800	3600	5700	8700
	10	OR	60	450	1560	3600	6300		
	15	FALL	90	750	2340	5400			
<b>0.25</b>	5	RISE	30	180	630	1500	2850	4800	7200
	10	OR	60	450	1200	3000	5400	8400	
	15	FALL	90	600	1920	4200	7500		
<b>0.275</b>	5	RISE	0	150	510	1200	2400	3900	6000
	10	OR	30	300	1050	2400	4800	7500	
	15	FALL	60	450	1500	3600	6300		
<b>0.3</b>	5	RISE	0	120	600	990	1920	3300	5400
	10	OR	30	270	900	1650	3900	6300	8700
	15	FALL	60	450	1290	2760	5400	8700	
<b>0.325</b>	5	RISE	0	120	360	840	1650	3000	4500
	10	OR	30	210	750	1800	3300	5700	8400
	15	FALL	60	330	1110	2550	4800	7800	
<b>0.35</b>	5	RISE	0	90	330	750	1440	2250	3900
	10	OR	30	180	510	1500	3000	5100	8100
	15	FALL	60	270	760	2220	4200	6600	9900
<b>0.375</b>	5	RISE	0	60	240	570	1110	1950	3000
	10	OR	30	150	510	1200	2250	3900	6000
	15	FALL	60	210	750	1710	2700	4500	7500

UNIT SIZE 1

VOLUME m <sup>3</sup> /s	TEMP Diff °C	THROW METRES →	3	6	9	12	15	18	21
<b>0.025</b>	5	RISE	2360						
	10	OR	5680						
	15	FALL	8800						
<b>0.05</b>	5	RISE	320	2970					
	10	OR	840	7650					
	15	FALL	1550						
<b>0.075</b>	5	RISE	130	1100	3980	8260			
	10	OR	340	2620	8300				
	15	FALL	540	4500					
<b>0.1</b>	5	RISE	90	540	1920	4560	7720		
	10	OR	150	1410	4540				
	15	FALL	310	2220	7690				
<b>0.125</b>	5	RISE	60	390	1200	3000	5400	9000	
	10	OR	120	570	2400	5400			
	15	FALL	180	810	3900				
<b>0.15</b>	5	RISE	300	300	900	2400	4500	6900	
	10	OR	90	600	1800	4200	6900		
	15	FALL	120	900	3000	6600			
<b>0.175</b>	5	RISE	30	210	750	1800	3300	5700	8700
	10	OR	60	450	1200	3000	5400	8100	
	15	FALL	90	600	1800	5100			
<b>0.2</b>	5	RISE	30	150	510	1200	2400	4200	5700
	10	OR	60	300	750	2250	3900	6600	9300
	15	FALL	90	450	1050	3600	6600		
<b>0.225</b>	5	RISE	0	120	420	1050	1950	3600	5400
	10	OR	30	270	810	1800	3300	5700	8100
	15	FALL	60	450	1350	3300	5700	9300	
<b>0.25</b>	5	RISE	0	90	330	810	1560	2700	4500
	10	OR	30	210	690	1500	2700	5400	6600
	15	FALL	60	300	1050	2550	4800	7500	9200
<b>0.275</b>	5	RISE	0	90	270	660	1260	2160	3600
	10	OR	30	150	540	1200	2250	3900	5400
	15	FALL	60	210	810	2100	3900	6000	9300



# SERIES DL

## Drum Louvre Rise & Fall Charts

### UNIT SIZE 4

VOLUME m <sup>3</sup> /s	TEMP DIFF °C	THROW METRES →	3	6	9	12	15	18	21	24
<b>0.075</b>	5	RISE	1300	8400						
	10	OR	3440							
	15	FALL	5930							
<b>0.125</b>	5	RISE	310	2150	7450					
	10	OR	780	5800						
	15	FALL	1600	7950						
<b>0.175</b>	5	RISE	130	1020	3550	7400				
	10	OR	320	2170	7500					
	15	FALL	520	4520	8650					
<b>0.225</b>	5	RISE	110	520	1850	4100	7460			
	10	OR	200	1310	4700	7880				
	15	FALL	320	2100	7650	8300				
<b>0.275</b>	5	RISE	80	280	930	2440	4800	7600		
	10	OR	120	760	2680	6350	8430			
	15	FALL	200	1270	4320	8150				
<b>0.3</b>	5	RISE	60	390	1260	3000	5700	8400		
	10	OR	90	750	2400	6000				
	15	FALL	150	1110	3900	6000				
<b>0.325</b>	5	RISE	60	330	1080	2580	5100	7500		
	10	OR	90	660	2160	5100				
	15	FALL	120	1020	3300	6000				
<b>0.35</b>	5	RISE	30	270	810	1980	3900	6000	9000	
	10	OR	60	450	1650	3900	6900			
	15	FALL	90	750	2460	6000				
<b>0.375</b>	5	RISE	30	210	720	1710	3300	5700	8100	
	10	OR	60	420	1410	3300	6000	9600		
	15	FALL	90	660	2250	5400				
<b>0.425</b>	5	RISE	30	180	570	1350	2700	4500	6600	
	10	OR	60	330	1110	2700	5100	7800		
	15	FALL	90	510	1800	3900	7800			
<b>0.475</b>	5	RISE	0	150	480	1110	2250	3600	5700	
	10	OR	30	270	960	2160	4200	6600		
	15	FALL	60	420	1410	3300	6300			
<b>0.5</b>	5	RISE	0	120	360	840	1650	2850	4500	6000
	10	OR	0	210	720	1680	3300	5700	7800	
	15	FALL	0	330	1050	2550	4950	7425		
<b>0.55</b>	5	RISE	90	330	1050	2100	4200	6300	9450	
	10	OR	180	660	2100	4200	6300	9450		
	15	FALL	270	990	3150	6300	9450			
<b>0.6</b>	5	RISE	90	270	810	1800	3600	5400	8100	
	10	OR	180	540	1620	3600	5400	8100		
	15	FALL	270	810	2430	5400	8100			

### UNIT SIZE 3

VOLUME m <sup>3</sup> /s	TEMP DIFF °C	THROW METRES →	3	6	9	12	15	18	21	24
<b>0.075</b>	5	RISE	550	4700	8850					
	10	OR	3500							
	15	FALL	5950							
<b>0.1</b>	5	RISE	320	2160	7570					
	10	OR	1600	7940						
	15	FALL	2780							
<b>0.125</b>	5	RISE	140	1250	4350	7900				
	10	OR	770	5730						
	15	FALL	1590	7900						
<b>0.150</b>	5	RISE	110	870	2520	6450	8450			
	10	OR	540	3700	8300					
	15	FALL	1030	6100						
<b>0.175</b>	5	RISE	90	510	1680	4280	7700			
	10	OR	310	2450	7920					
	15	FALL	530	3880	8800					
<b>0.2</b>	5	RISE	60	390	1350	3300	5400	9300		
	10	OR	120	780	2700	5400				
	15	FALL	150	1200	4200	6600				
<b>0.225</b>	5	RISE	60	360	1200	2940	5400	8400		
	10	OR	90	720	2400	5400				
	15	FALL	150	1110	3600	5400				
<b>0.25</b>	5	RISE	30	330	1110	2700	4800	7200		
	10	OR	90	660	2220	5400	8100			
	15	FALL	120	990	3300	6600				
<b>0.275</b>	5	RISE	30	240	810	1950	3900	6000	9300	
	10	OR	60	480	1650	3900	6600			
	15	FALL	90	750	2400	5400				
<b>0.3</b>	5	RISE	30	210	690	1800	3600	5400	8100	
	10	OR	60	420	1410	3600	6000	8100		
	15	FALL	90	660	2220	5400	8100			
<b>0.35</b>	5	RISE	0	150	510	1200	2400	3900	6000	
	10	OR	30	300	1020	2400	4500	6900		
	15	FALL	60	450	1500	3600	6300			
<b>0.4</b>	5	RISE	0	90	300	720	1410	2460	3900	
	10	OR	0	180	630	1380	2820	4800	6900	
	15	FALL	30	270	900	2160	4200	6900		
<b>0.45</b>	5	RISE	0	60	240	570	1170	1980	3300	
	10	OR	0	150	510	1200	2280	2900	5700	
	15	FALL	30	210	750	1680	3600	5700	8400	
<b>0.55</b>	5	RISE	0	60	300	780	1530	2700	4200	6000
	10	OR	0	150	750	1800	3600	5400	8100	12000
	15	FALL	30	210	1050	2550	4950	7425	11100	16650



# SERIES DL

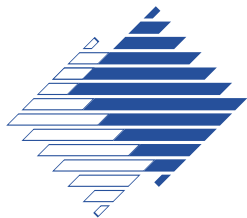
## Drum Louvre Rise & Fall Charts

### UNIT SIZE 6

VOLUME m <sup>3</sup> /s	TEMP DIFF °C	THROW METRES →	6	9	12	15	18	21	24	27	30
<b>0.15</b>	5	RISE	4920								
	10	OR	8300								
	15	FALL									
<b>0.2</b>	5	RISE	2220	6650							
	10	OR	6050								
	15	FALL	7850								
<b>0.25</b>	5	RISE	1320	4390	8280						
	10	OR	3000	7700							
	15	FALL	3400	8000							
<b>0.3</b>	5	RISE	800	2750	6500	8450					
	10	OR	3150	7900							
	15	FALL	3800	8480							
<b>0.35</b>	5	RISE	580	1900	4350	7550	9500				
	10	OR	1900	6000	8850						
	15	FALL	2300	7300							
<b>0.4</b>	5	RISE	380	1200	2950	6000	8350				
	10	OR	890	3300	7150	9100					
	15	FALL	1650	5750	8400						
<b>0.45</b>	5	RISE	330	1050	2150	4250	6800				
	10	OR	800	2400	5550	8150					
	15	FALL	1100	4100	8000						
<b>0.5</b>	5	RISE	240	810	1950	3900	6300	9900			
	10	OR	450	1650	3900	7500					
	15	FALL	690	2400	6000						
<b>0.55</b>	5	RISE	210	750	1800	3600	5700	8400			
	10	OR	420	1500	3600	6000					
	15	FALL	600	2100	5100						
<b>0.65</b>	5	RISE	150	540	1320	2700	4500	6900			
	10	OR	330	1080	2700	5400	8400				
	15	FALL	480	1650	3900	7500					
<b>0.75</b>	5	RISE	120	420	1050	2100	3600	5700	7800		
	10	OR	240	810	2100	4200	6600				
	15	FALL	360	1260	3000	6000					
<b>0.95</b>	5	RISE	270	810	1800	3600	5700	8400	9300		
	10	OR	510	1530	3600	7200					
	15	FALL	750	2250	5100	9900					
<b>1.1</b>	5	RISE	210	630	1500	3000	4500	6750	8100		
	10	OR	420	1260	3000	6000					
	15	FALL	630	1890	4500	8100					
<b>1.2</b>	5	RISE	150	450	1125	2250	3375	5062	6000		
	10	OR	300	900	2250	4500					
	15	FALL	450	1350	3375	6750					
<b>1.3</b>	5	RISE	120	360	900	1800	2700	4050	4800		
	10	OR	240	720	1800	3600					
	15	FALL	360	1080	2700	5400					

### UNIT SIZE 5

VOLUME m <sup>3</sup> /s	TEMP DIFF °C	THROW METRES →	3	6	9	12	15	18	21	24	27
<b>0.1</b>	5	RISE	1310	7580							
	10	OR	3100								
	15	FALL	5100								
<b>0.15</b>	5	RISE	350	3080	8400						
	10	OR	1050	6980							
	15	FALL	1890	8290							
<b>0.2</b>	5	RISE	160	1300	4800	8300					
	10	OR	560	3560	8320						
	15	FALL	790	5920							
<b>0.25</b>	5	RISE	120	810	2800	6750	8600				
	10	OR	340	2000	7100						
	15	FALL	450	3100	8310						
<b>0.3</b>	5	RISE	80	550	1710	4080	7720	8800			
	10	OR	250	1330	4100	7600					
	15	FALL	330	3100	7620						
<b>0.35</b>	5	RISE	80	340	1010	2600	5250	7930			
	10	OR	170	800	2750	6830	8480				
	15	FALL	220	1340	5000	8240					
<b>0.4</b>	5	RISE	280	840	1900	3800	6050				
	10	OR	550	1750	4650	8100					
	15	FALL	720	3410	7560						
<b>0.475</b>	5	RISE	30	220	720	1800	3300	6000	8700		
	10	OR	60	390	1380	3300	6300				
	15	FALL	60	600	2220	5400					
<b>0.55</b>	5	RISE	90	150	510	1200	2400	4200	6300	9300	
	10	OR	140	270	960	2400	4800	8100			
	15	FALL	220	360	1470	3900	6900				
<b>0.6</b>	5	RISE	120	240	450	1080	2160	3600	5700	8400	
	10	OR	240	490	900	2190	4200	7200			
	15	FALL	330	630	1350	3300	6000				
<b>0.65</b>	5	RISE	120	240	450	900	1800	3300	5100	7200	
	10	OR	240	490	900	1800	3600	6000	9600		
	15	FALL	330	630	1110	2820	5400	9300			
<b>0.75</b>	5	RISE	90	150	300	720	1410	2400	3900	5700	
	10	OR	150	270	540	1410	2820	4800	7800		
	15	FALL	240	360	870	2100	4200	7200			
<b>0.85</b>	5	RISE	60	120	240	570	1110	1920	3000	4500	
	10	OR	120	240	490	1110	2250	4080	6000	8700	
	15	FALL	180	360	690	1680	3300	5400	8400		
<b>0.95</b>	5	RISE	450	900	1800	4500	9000	15300	25500	36000	51000
	10	OR	900	1800	3600	9000	18000	30000	51000	69000	87000
	15	FALL	1350	2700	4050	13500	27000	40500	60000	81000	108000



# SERIES DL

## Drum Louvre Rise & Fall Charts

UNIT SIZE 8

VOLUME m <sup>3</sup> /s	TEMP DIFF °C	THROW METRES →	6	9	12	15	18	21	24	27	30
0.25	5	RISE	2600	7700							
	10	OR	6470								
	15	FALL	8480								
0.35	5	RISE	1050	3700	7750						
	10	OR	2800								
	15	FALL	4850								
0.45	5	RISE	570	1900	4400	7600					
	10	OR	1350								
	15	FALL	2590								
0.55	5	RISE	390	1150	2450	5150	7600				
	10	OR	780								
	15	FALL	1350								
0.65	5	RISE	295	895	1720	3560	5930				
	10	OR	590								
	15	FALL	1020								
0.75	5	RISE	210	720	1650	3300	5700	8400			
	10	OR	390								
	15	FALL	660								
0.85	5	RISE	180	540	1350	2550	4200	6300	9600		
	10	OR	360								
	15	FALL	450								
0.95	5	RISE	140	450	1110	2220	3900	6000	8400		
	10	OR	280								
	15	FALL	360								
1.1	5	RISE	300	750	1500	2550	4200	6000	8100		
	10	OR	600								
	15	FALL	900								
1.2	5	RISE	240	600	1200	2000	3300	5100	6900	9300	
	10	OR	480								
	15	FALL	660								
1.3	5	RISE	240	600	1200	2000	3300	5100	6900	9300	
	10	OR	480								
	15	FALL	660								
1.4	5	RISE	210	480	990	1740	2700	4200	5400	7200	
	10	OR	420								
	15	FALL	630								
1.6	5	RISE	150	360	690	1200	1920	2850	3900	5400	
	10	OR	300								
	15	FALL	450								
1.9	5	RISE	120	270	510	870	1300	1920	2650	3600	4200
	10	OR	240								
	15	FALL	330								

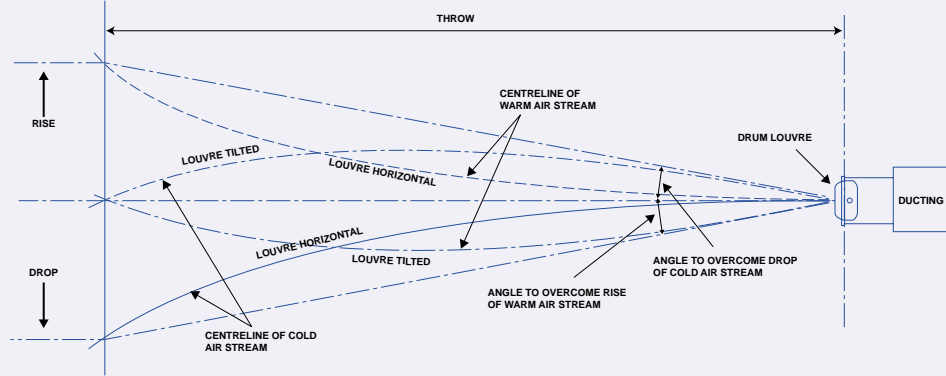
UNIT SIZE 7

VOLUME m <sup>3</sup> /s	TEMP DIFF °C	THROW METRES →	6	9	12	15	18	21	24	27	30
0.15	5	RISE	8600								
	10	OR									
	15	FALL									
0.25	5	RISE	2740	8040							
	10	OR	6700								
	15	FALL	8400								
0.35	5	RISE	1070	3900	7600						
	10	OR	2700								
	15	FALL	4400								
0.45	5	RISE	530	1900	4500	8000					
	10	OR	1550								
	15	FALL	2480								
0.55	5	RISE	300	1040	2420	4800	7470				
	10	OR	600								
	15	FALL	1400								
0.65	5	RISE	210	750	1800	3300	5700	8100			
	10	OR	420								
	15	FALL	780								
0.75	5	RISE	150	480	1200	2400	4200	6000	9000		
	10	OR	300								
	15	FALL	420								
0.85	5	RISE	120	420	1020	1950	3300	5400	7500		
	10	OR	240								
	15	FALL	360								
0.95	5	RISE	80	330	810	1650	2700	4500	6000	8700	
	10	OR	160								
	15	FALL	240								
1.1	5	RISE	240	600	1200	2220	3000	4500	6000	8100	
	10	OR	480								
	15	FALL	660								
1.2	5	RISE	210	480	960	1650	2640	3900	5700	7200	
	10	OR	420								
	15	FALL	630								
1.3	5	RISE	150	420	810	1560	2160	3300	4800	6000	
	10	OR	300								
	15	FALL	480								
1.4	5	RISE	150	360	690	1200	1920	2850	3900	5400	
	10	OR	300								
	15	FALL	450								
1.6	5	RISE	90	240	480	840	1350	2040	2850	4050	
	10	OR	180								
	15	FALL	270								



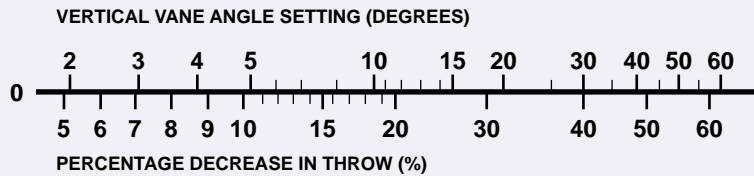
# SERIES DL

## Angular Discharge Correction Chart



		THROW (METRES)										
		3	6	9	12	15	18	21	24	27	30	36
RISE OR DROP (METRES)	0.03	1	1	1								
	0.15	3	2	1	1							
	0.30	6	3	2	1	1	1					
	0.60	11	6	4	3	2	2	2				
	1.20		11	8	6	5	4	3	3			
	1.80		17	11	9	7	6	5	4	4		
	2.40		22	15	11	9	8	7	6	5	5	
	3.00		27	18	14	11	10	8	7	6	6	
	4.50			27	21	17	14	12	11	9	9	7
	6.00				27	22	18	16	15	12	12	10
	7.20					27	23	20	17	16	14	12
	9.15						27	23	21	18	17	14
	10.66							27	24	21	19	16
	12.20								27	24	22	18
	13.72									27	25	21
	15.24				CORRECTION IN DEGREES							
16.77											25	
18.30											27	

## Vane Adjustment

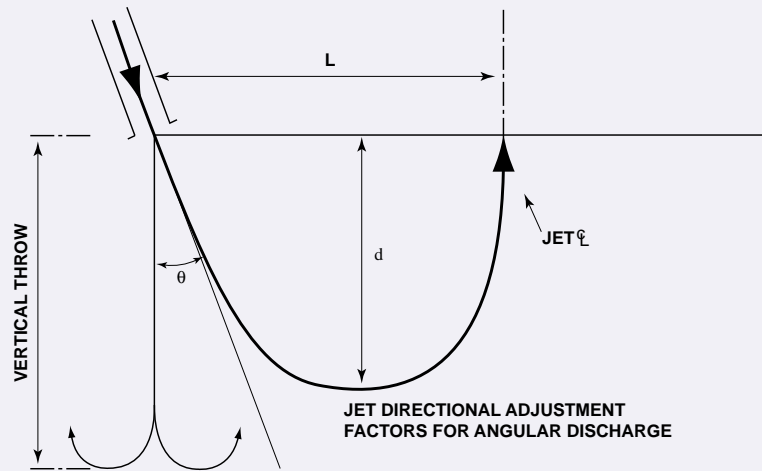


EXAMPLE: A 5° DEGREE CHANGE OF BLADE ANGLE CAUSES A 10% DECREASE IN THROW.



# SERIES DL

Correctional  
Figures for  
Angular  
Variance to  
Vertical  
Performance



Take Maximum Throw ( $T_M$ ) from Tables

Hence,  $d = K_1 T_M$   
 $L = K_2 T_M$

$\theta^\circ$	$K_1$	$K_2$
0 -10	1.00	0.00
11 -20	0.98	0.45
21 -30	0.91	0.86
31 -40	0.81	1.21
41 -50	0.67	1.28
51 -60	0.52	1.60
61 -70	0.35	1.59
71 -80	0.20	1.43
81 -90	0.07	1.07

## VERTICAL THROW EXAMPLE (ISOTHERMAL CONDITIONS)

Select and size Drum Louvre from sizing charts on pages 6, 7, 8 and 9 in accordance with the first part of the selection procedure on page 2.

## VERTICAL THROW (HEATING)

A requirement for 10°C heating is required at a volume of 0.4 M<sup>3</sup>/s to throw vertically to floor level 10m away.

To select a Drum Louvre size we simply view our table on page 15.

Reviewing  $\Delta t = 10^\circ\text{C}$  chart with a volume of 0.4 m<sup>3</sup>/s gives a size 4 drum louvre selection to give a 10m throw to 0.1m/s terminal velocity. Therefore a size DL/4 unit should be selected.

## VERTICAL THROW ANGULAR ADJUSTMENT (HEATING)

All previous data has assumed a direct vertical discharge, although we can calculate a throw pattern for an angular discharge using our table above.

Using the previous data of +10°C  $\Delta t$  and 0.4m<sup>3</sup>/s we can calculate the new air path by using the listed formulas, assuming a 30° angle, by using the formula stated.

Discharge at 30° off set from vertical

$$d = K_1 \times T_M, \quad d = 0.91 \times 10\text{m}, \quad d = 9.1\text{m vertical}$$

$$L = K_2 \times T_M, \quad L = 0.86 \times 10\text{m}, \quad L = 8.6\text{m horizontal}$$



# SERIES DL

## Drum Louvre

Vertical  
Performance  
Under Heating  
Conditions

(this data is for  
reference only with  
throws shown to 0.1m/s  
terminal velocity)

$\Delta T = 5^\circ C$

Q (m³/s)	Maximum Throw (m)								
	2.5	5	7.5	10	15	20	25	30	
0.05	3								
0.10	5	3	2	1					
0.15	8	4	3	2	1				
0.20		5	6	4	2	1			
0.30		8	7	5	4	2	1		
0.40			8	7	6	4	3	2	
0.60				8	7	6	4	3	
0.80					8	7	6	5	
1.00						8	7	6	
1.50	DRUM LOUVRE SIZE							8	
2.00									
3.00									
4.00									

$\Delta T = 10^\circ C$

Q (m³/s)	Maximum Throw (m)								
	2.5	5	7.5	10	15	20	25	30	
0.05									
0.10	4								
0.15	6	3	2						
0.20	7	4	3	2					
0.30		6	5	3	2				
0.40		8	6	4	3	2			
0.60			8	6	5	4	3	2	
0.80				8	6	5	4	3	
1.00					8	6	5	4	
1.50	DRUM LOUVRE SIZE					8	6	5	
2.00								8	7
3.00									
4.00									

$\Delta T = 15^\circ C$

Q (m³/s)	Maximum Throw (m)								
	2.5	5	7.5	10	15	20	25	30	
0.05	1								
0.10	3	1							
0.15	5	2	1						
0.20	6	4	2	1					
0.30		5	4	3	1				
0.40		7	5	4	2	1			
0.60			7	5	4	3	2	1	
0.80				7	5	4	3	2	
1.00					7	5	4	3	
1.50	DRUM LOUVRE SIZE					7	5	4	
2.00								8	6
3.00									
4.00									

$\Delta T = 20^\circ C$

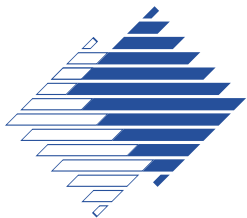
Q (m³/s)	Maximum Throw (m)								
	2.5	5	7.5	10	15	20	25	30	
0.05									
0.10	3								
0.15	4	1							
0.20	5	3	2	1					
0.30	8	4	3	2					
0.40		5	4	3	1				
0.60			6	4	3	2			
0.80			8	6	4	3	2	1	
1.00				8	5	4	3	2	
1.50	DRUM LOUVRE SIZE				8	6	5	4	
2.00							8	6	5
3.00									
4.00									

$\Delta T = 30^\circ C$

Q (m³/s)	Maximum Throw (m)								
	2.5	5	7.5	10	15	20	25	30	
0.05									
0.10	2								
0.15	3	1							
0.20	4	2	1						
0.30	7	4	3	1					
0.40		5	4	3	1				
0.60		7	5	3	2				
0.80			7	5	4	3	2	1	
1.00			8	6	5	4	3	2	
1.50	DRUM LOUVRE SIZE				6	5	4	3	
2.00						8	6	5	4
3.00								8	7
4.00									

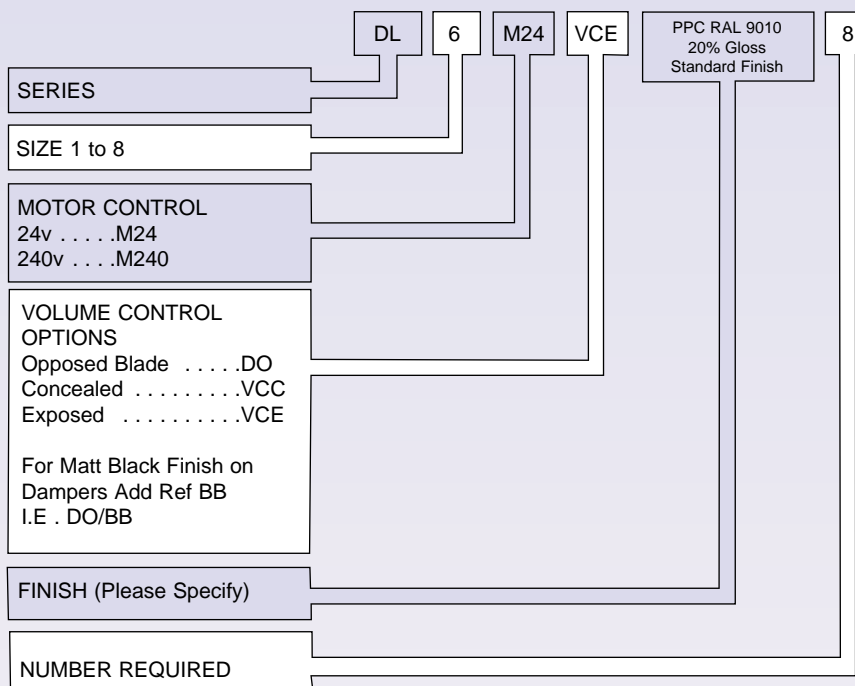
$\Delta T = 40^\circ C$

Q (m³/s)	Maximum Throw (m)								
	2.5	5	7.5	10	15	20	25	30	
0.05									
0.10	1								
0.15	2	1							
0.20	4	2							
0.30	5	3	2	1					
0.40		4	3	2					
0.60		6	4	3	2	1			
0.80		8	6	4	3	2			
1.00			7	5	4	3	2	1	
1.50	DRUM LOUVRE SIZE			8	5	4	3	2	
2.00						8	5	4	3
3.00							8	7	5
4.00									7



# SERIES DL

## Ordering Specification



Example : DL1 / M24 / DO / VCC / BB PPC RAL 9010 20% Gloss

### FINISH

Standard Finish: Polyester Powder Coat White RAL 9010 20% Gloss.

Special Finishes: PPC to Stock BS or RAL colour.

Stove Enamel to BS/RAL colour.

### FIXING

Standard flange screw fixing using self tapping screws.

## Contact

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