

Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)



Shaft Louvre Damper – Residential (SLD-R), are multi-zone smoke control dampers and designed for use in mechanical smoke ventilation systems. They are typically installed into smoke control ducts to provide extract ventilation to corridors and lobbies in residential and commercial buildings.

Specific Features

- Certified to BS EN 12101-8:2011
- Classified to EN 1366-2 and EN 1366-10
- Fire resistance class EIS 120.
- Suitable for smoke control in multi-zone mechanical smoke ventilation systems
- May be used for environmental ventilation
- Available up to 0.96m² maximum geometric area with a wide range of sizes
- Manufactured with galvanised fire protected housing for installation directly into smoke duct apertures
- Removable white linear grill internally provides a neat finish whilst enabling quick access for commissioning and service
- Remote signalling of both open and closed positions

Product Description

Shaft Louvre Damper – Residential (SLD-R), are multi-zone smoke control dampers and designed for use in mechanical smoke ventilation systems. They are typically installed into shafts to provide extract ventilation to corridors and into smoke control ducts in residential and commercial buildings.

They are certified to BS EN 12101-8:2011 and have a fire resistance class of EIS 120. They may be used in multi-compartmented smoke control ducts and have an integrity and insulation of 120 minutes. In addition they have been tested for reliability up to 10,000 cycles and may be used for environmental ventilation.

They are manufactured with a galvanised casing, and fire rated multi-blade louvres and operate by a drive open/drive close 24V AC/DC Belimo actuator. They are supplied with a removable white linear grill internally which provides a neat finish whilst enabling quick access for commissioning and service.

Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)

Classification according to BS EN 12101-8

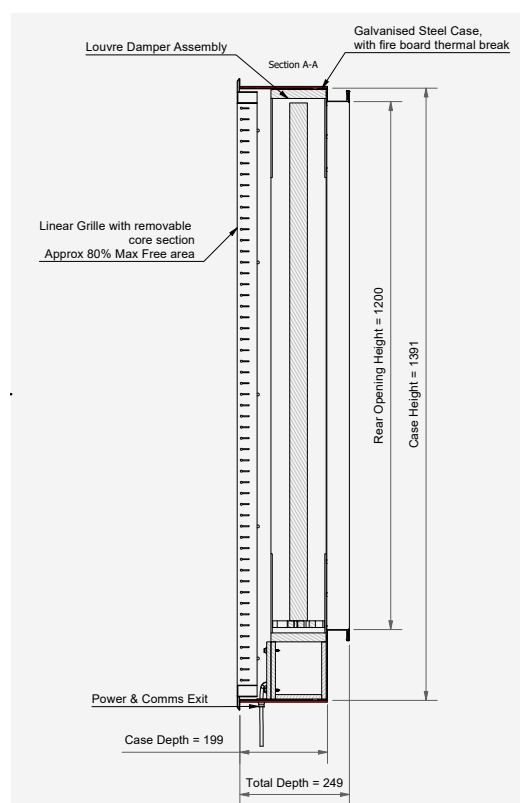
Maximum size Width X Height (mm)	869 x 1391
Response time/closure time	30s/60s
Operational reliability	10,000
Fire resistance – integrity	E120
Fire resistance – insulation	I120
Smoke Leakage – 1000PA	S1000
Activation	AA
Multi Compartment	Multi
Mounting Position	VEW
Testing Position	i↔0

Actuator technical data

Data	Value
Manufacturer/Type	Belimo/BLE24
Voltage	24V AC/DC
Power Consumption	0.3 Amp
Degree of Protection	IP54
Ambient Temperature	-30 to +50°C
Power Consumption in Operation	7.5W
Power Consumption in Rest	0.5W
Nominal Torque	50Nm
Sound Power Level	62dB
Connection Supply/Control	3 x 0.75mm ²
Connection Auxiliary Switch	6 x 0.75mm ²
Switching Points	3°/87°

Linear Grill

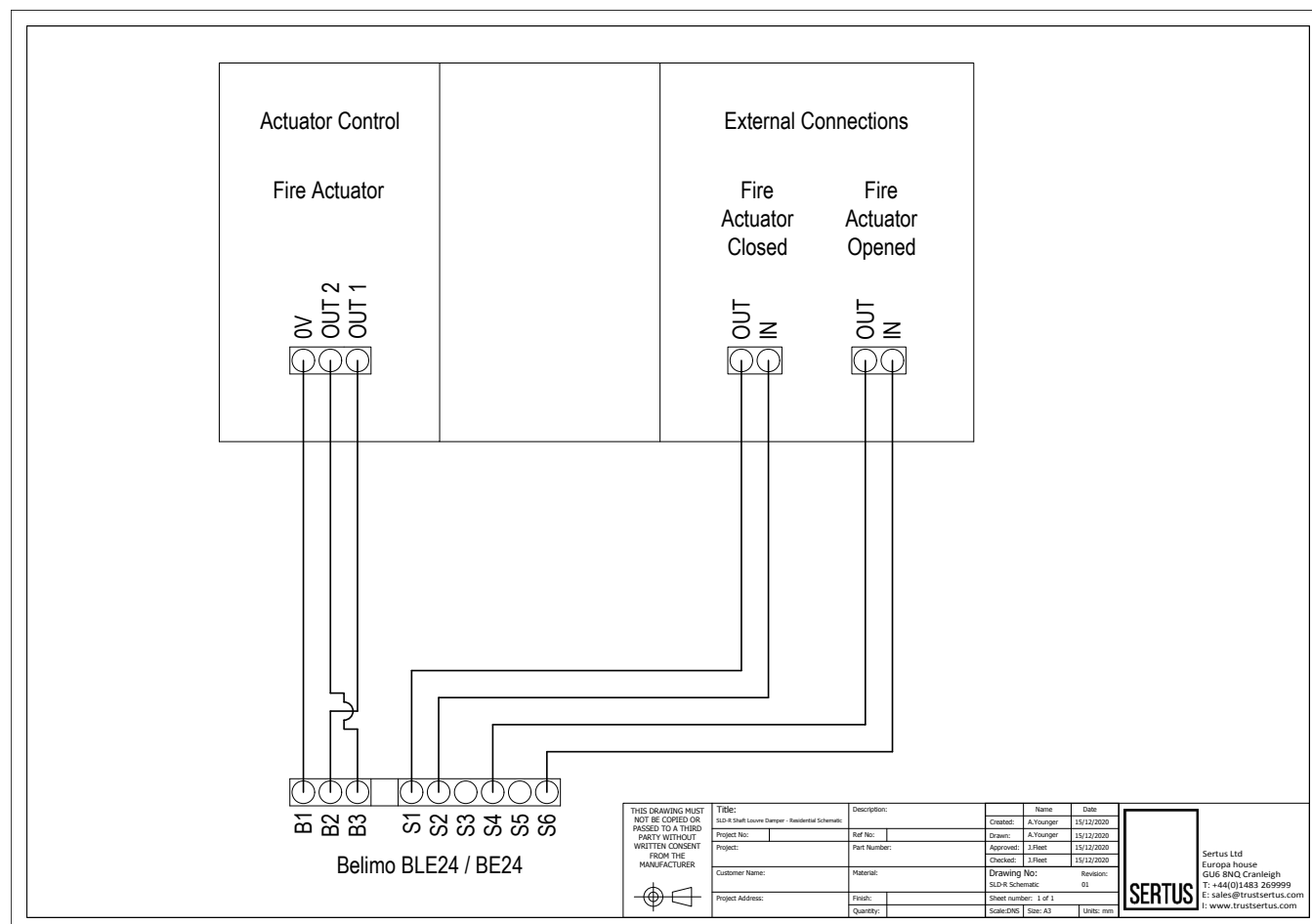
The SLD-R Linear Grill comprises of an extruded frame and aluminium fixed mesh blade 12 x 12mm. They are polyester powder coated to RAL 9010 white 20% gloss as standard. Other colours are available on request. The Linear Grill functions as an air transfer and access door. The mesh is framed and hinged with a open/close touch latch.



Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)

Wiring Details (to Addressable Control System)



Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)

Size Range

Type	Overall Width (mm)	Overall Height (mm)	Geometric Area (m²)	Free Area* (m²)	Velocity (m/s)	Flow rate (m³/s)	Pressure Drop (Pa) (incl. grille)	Noise Level (dBA)
SLD-R.50.20	569	391	0.10	0.06	4	0.40	16	27
					6	0.60	37	38
					8	0.80	65	46
					10	1.00	106	53
SLD-R.50.25	569	441	0.13	0.08	4	0.50	16	28
					6	0.75	37	39
					8	1.00	65	47
					10	1.25	106	54
SLD-R.50.30	569	491	0.15	0.09	4	0.60	16	29
					6	0.90	37	41
					8	1.20	65	48
					10	1.50	106	54
SLD-R.50.35	569	541	0.18	0.11	4	0.70	16	31
					6	1.05	37	42
					8	1.40	65	49
					10	1.75	106	55
SLD-R.50.40	569	591	0.20	0.12	4	0.80	16	31
					6	1.20	37	43
					8	1.60	65	49
					10	2.00	106	55
SLD-R.50.45	569	641	0.23	0.14	4	0.90	16	31
					6	1.35	37	43
					8	1.80	65	49
					10	2.25	106	57
SLD-R.50.50	569	691	0.25	0.15	4	1.00	16	31
					6	1.50	37	43
					8	2.00	65	49
					10	2.50	106	57
SLD-R.50.55	569	741	0.28	0.17	4	1.10	16	31
					6	1.65	37	43
					8	2.20	65	49
					10	2.75	106	57
SLD-R.50.60	569	791	0.30	0.18	4	1.20	16	30
					6	1.80	37	42
					8	2.40	65	49
					10	3.00	106	57

*Area between blades

Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)

Type	Overall Width (mm)	Overall Height (mm)	Geometric Area (m²)	Free Area* (m²)	Velocity (m/s)	Flow rate (m³/s)	Pressure Drop (Pa) (incl. grille)	Noise Level (dBA)
SLD-R.50.65	569	841	0.33	0.20	4	1.30	16	32
					6	1.95	37	43
					8	2.60	65	50
					10	3.25	106	57
SLD-R.50.70	569	891	0.35	0.21	4	1.40	16	33
					6	2.10	37	44
					8	2.80	65	51
					10	3.50	106	57
SLD-R.50.75	569	941	0.38	0.23	4	1.50	16	35
					6	2.25	37	45
					8	3.00	65	52
					10	3.75	106	57
SLD-R.50.80	569	991	0.40	0.24	4	1.60	16	34
					6	2.40	37	45
					8	3.20	65	52
					10	4.00	106	57
SLD-R.50.85	569	1041	0.43	0.26	4	1.70	16	34
					6	2.55	37	45
					8	3.40	65	52
					10	4.25	106	57
SLD-R.50.90	569	1091	0.45	0.27	4	1.80	16	35
					6	2.70	37	45
					8	3.60	65	53
					10	4.50	106	58
SLD-R.50.95	569	1141	0.48	0.29	4	1.90	16	35
					6	2.85	37	45
					8	3.80	65	53
					10	4.75	106	58
SLD-R.50.100	569	1191	0.50	0.30	4	2.00	16	35
					6	3.00	37	45
					8	4.00	65	53
					10	5.00	106	58
SLD-R.50.105	569	1241	0.53	0.32	4	2.10	16	35
					6	3.15	37	45
					8	4.20	65	53
					10	5.25	106	58
SLD-R.50.110	569	1291	0.55	0.33	4	2.20	16	35
					6	3.30	37	45

*Area between blades

Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)

Type	Overall Width (mm)	Overall Height (mm)	Geometric Area (m²)	Free Area* (m²)	Velocity (m/s)	Flow rate (m³/s)	Pressure Drop (Pa) (incl. grille)	Noise Level (dBA)
SLD-R.50.115	569	1341	0.58	0.35	8	4.40	65	53
					10	5.50	106	58
					4	2.30	16	35
					6	3.45	37	45
					8	4.60	65	53
SLD-R.50.120	569	1391	0.60	0.36	10	5.75	106	58
					4	2.40	16	34
					6	3.60	37	45
					8	4.80	65	53
					10	6.00	106	58
SLD-R.60.20	669	391	0.12	0.07	4	0.48	16	27
					6	0.72	36	38
					8	0.96	63	46
					10	1.20	105	53
					4	0.60	16	28
SLD-R.60.25	669	441	0.15	0.09	6	0.90	36	39
					8	1.20	63	46
					10	1.50	105	53
					4	0.72	16	29
					6	1.08	36	40
SLD-R.60.30	669	491	0.18	0.11	8	1.44	63	47
					10	1.80	105	54
					4	0.84	16	30
					6	1.26	36	42
					8	1.68	63	48
SLD-R.60.35	669	541	0.21	0.13	10	2.10	105	55
					4	0.96	16	31
					6	1.44	36	43
					8	1.92	63	48
					10	2.40	105	55
SLD-R.60.40	669	591	0.24	0.14	4	1.08	16	32
					6	1.62	36	43
					8	2.16	63	49
					10	2.70	105	56
					4	1.20	16	33
SLD-R.60.45	669	641	0.27	0.16	6	1.80	36	43
					8	2.40	63	50
					10	3.00	105	57
					4	1.20	16	33
					6	1.80	36	43
SLD-R.60.50	669	691	0.30	0.18	8	2.40	63	50
					10	3.00	105	57
					4	1.20	16	33
					6	1.80	36	43
					8	2.40	63	50

*Area between blades

Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)

Type	Overall Width (mm)	Overall Height (mm)	Geometric Area (m²)	Free Area* (m²)	Velocity (m/s)	Flow rate (m³/s)	Pressure Drop (Pa) (incl. grille)	Noise Level (dBA)
SLD-R.60.55	669	741	0.33	0.20	4	1.32	16	33
					6	1.98	36	43
					8	2.64	63	52
					10	3.30	105	58
SLD-R.60.60	669	791	0.36	0.22	4	1.44	16	33
					6	2.16	36	43
					8	2.88	63	52
					10	3.60	105	58
SLD-R.60.65	669	841	0.39	0.24	4	1.56	16	33
					6	2.34	36	43
					8	3.12	63	52
					10	3.90	105	58
SLD-R.60.70	669	891	0.42	0.25	4	1.68	16	34
					6	2.52	36	44
					8	3.36	63	52
					10	4.20	105	58
SLD-R.60.75	669	941	0.45	0.27	4	1.80	16	34
					6	2.70	36	45
					8	3.60	63	52
					10	4.50	105	57
SLD-R.60.80	669	991	0.48	0.29	4	1.92	16	34
					6	2.88	36	45
					8	3.84	63	52
					10	4.80	105	57
SLD-R.60.85	669	1041	0.51	0.31	4	2.04	16	34
					6	3.06	36	45
					8	4.08	63	52
					10	5.10	105	57
SLD-R.60.90	669	1091	0.54	0.32	4	2.16	16	35
					6	3.24	36	45
					8	4.32	63	53
					10	5.40	105	58
SLD-R.60.95	669	1141	0.57	0.34	4	2.28	16	35
					6	3.42	36	45
					8	4.56	63	53
					10	5.70	105	58
SLD-R.60.100	669	1191	0.60	0.36	4	2.40	16	35
					6	3.60	36	45

*Area between blades

Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)

Type	Overall Width (mm)	Overall Height (mm)	Geometric Area (m²)	Free Area* (m²)	Velocity (m/s)	Flow rate (m³/s)	Pressure Drop (Pa) (incl. grille)	Noise Level (dBA)
SLD-R.60.105	669	1241	0.63	0.38	8	4.80	63	53
					10	6.00	105	58
					4	2.52	16	35
					6	3.78	36	45
					8	5.04	63	53
SLD-R.60.110	669	1291	0.66	0.40	10	6.30	105	58
					4	2.64	16	35
					6	3.96	36	45
					8	5.28	63	53
					10	6.60	105	58
SLD-R.60.115	669	1341	0.69	0.42	4	2.76	16	35
					6	4.14	36	45
					8	5.52	63	53
					10	6.90	105	58
SLD-R.60.120	669	1391	0.72	0.43	4	2.88	16	34
					6	4.32	36	45
					8	5.76	63	53
					10	7.20	105	58
SLD-R.70.20	769	391	0.14	0.08	4	0.56	15	28
					6	0.84	35	40
					8	1.12	61	47
					10	1.40	99	54
SLD-R.70.25	769	441	0.18	0.11	4	0.70	15	29
					6	1.05	35	41
					8	1.40	61	48
					10	1.75	99	54
SLD-R.70.30	769	491	0.21	0.13	4	0.84	15	30
					6	1.26	35	42
					8	1.68	61	49
					10	2.10	99	54
SLD-R.70.35	769	541	0.25	0.15	4	0.98	15	31
					6	1.47	35	43
					8	1.96	61	50
					10	2.45	99	55
SLD-R.70.40	769	591	0.28	0.17	4	1.12	15	31
					6	1.68	35	43
					8	2.24	61	50
					10	2.80	99	55

*Area between blades

Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)

Type	Overall Width (mm)	Overall Height (mm)	Geometric Area (m²)	Free Area* (m²)	Velocity (m/s)	Flow rate (m³/s)	Pressure Drop (Pa) (incl. grille)	Noise Level (dBA)
SLD-R.70.45	769	641	0.32	0.19	4	1.26	15	32
					6	1.89	35	43
					8	2.52	61	51
					10	3.15	99	56
SLD-R.70.50	769	691	0.35	0.21	4	1.40	15	32
					6	2.10	35	43
					8	2.80	61	52
					10	3.50	99	57
SLD-R.70.55	769	741	0.39	0.23	4	1.54	15	33
					6	2.31	35	44
					8	3.08	61	53
					10	3.85	99	58
SLD-R.70.60	769	791	0.42	0.25	4	1.68	15	33
					6	2.52	35	44
					8	3.36	61	53
					10	4.20	99	59
SLD-R.70.65	769	841	0.46	0.27	4	1.82	15	34
					6	2.73	35	44
					8	3.64	61	53
					10	4.55	99	59
SLD-R.70.70	769	891	0.49	0.29	4	1.96	15	35
					6	2.94	35	45
					8	3.92	61	52
					10	4.90	99	58
SLD-R.70.75	769	941	0.53	0.32	4	2.10	15	35
					6	3.15	35	45
					8	4.20	61	52
					10	5.25	99	58
SLD-R.70.80	769	991	0.56	0.34	4	2.24	15	35
					6	3.36	35	45
					8	4.48	61	52
					10	5.60	99	58
SLD-R.70.85	769	1041	0.60	0.36	4	2.38	15	35
					6	3.57	35	45
					8	4.76	61	52
					10	5.95	99	58
SLD-R.70.90	769	1091	0.63	0.38	4	2.52	15	35
					6	3.78	35	45

*Area between blades

Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)

Type	Overall Width (mm)	Overall Height (mm)	Geometric Area (m²)	Free Area* (m²)	Velocity (m/s)	Flow rate (m³/s)	Pressure Drop (Pa) (incl. grille)	Noise Level (dBA)
SLD-R.70.95	769	1141	0.67	0.40	8	5.04	61	53
					10	6.30	99	59
					4	2.66	15	35
					6	3.99	35	45
					8	5.32	61	53
SLD-R.70.100	769	1191	0.70	0.42	10	6.65	99	59
					4	2.80	15	35
					6	4.20	35	45
					8	5.60	61	53
					10	7.00	99	59
SLD-R.70.105	769	1241	0.74	0.44	4	2.94	15	35
					6	4.41	35	45
					8	5.88	61	53
					10	7.35	99	59
					4	3.08	15	35
SLD-R.70.110	769	1291	0.77	0.46	6	4.62	35	46
					8	6.16	61	54
					10	7.70	99	59
					4	3.22	15	35
					6	4.83	35	46
SLD-R.70.115	769	1341	0.81	0.48	8	6.44	61	54
					10	8.05	99	59
					4	3.36	15	35
					6	5.04	35	46
					8	6.72	61	54
SLD-R.70.120	769	1391	0.84	0.50	10	8.40	99	59
					4	0.64	15	29
					6	0.96	33	41
					8	1.28	60	47
					10	1.60	97	54
SLD-R.80.20	869	391	0.16	0.10	4	0.80	15	30
					6	1.20	33	42
					8	1.60	60	48
					10	2.00	97	55
					4	0.96	15	31
SLD-R.80.25	869	441	0.20	0.12	6	1.44	33	43
					8	1.92	60	49
					10	2.40	97	55
					4	0.96	15	31
					6	1.44	33	43
SLD-R.80.30	869	491	0.24	0.14	8	1.92	60	49
					10	2.40	97	55
					4	0.96	15	31
					6	1.44	33	43
					8	1.92	60	49

*Area between blades

Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)

Type	Overall Width (mm)	Overall Height (mm)	Geometric Area (m²)	Free Area* (m²)	Velocity (m/s)	Flow rate (m³/s)	Pressure Drop (Pa) (incl. grille)	Noise Level (dBA)
SLD-R.80.35	869	541	0.28	0.17	4	1.12	15	31
					6	1.68	33	43
					8	2.24	60	51
					10	2.80	97	55
SLD-R.80.40	869	591	0.32	0.19	4	1.28	15	31
					6	1.92	33	43
					8	2.56	60	51
					10	3.20	97	55
SLD-R.80.45	869	641	0.36	0.22	4	1.44	15	32
					6	2.16	33	44
					8	2.88	60	52
					10	3.60	97	57
SLD-R.80.50	869	691	0.40	0.24	4	1.60	15	32
					6	2.40	33	44
					8	3.20	60	52
					10	4.00	97	58
SLD-R.80.55	869	741	0.44	0.27	4	1.76	15	33
					6	2.64	33	45
					8	3.52	60	53
					10	4.40	97	59
SLD-R.80.60	869	791	0.48	0.29	4	1.92	15	33
					6	2.88	33	45
					8	3.84	60	53
					10	4.80	97	59
SLD-R.80.65	869	841	0.52	0.32	4	2.08	15	33
					6	3.12	33	45
					8	4.16	60	53
					10	5.20	97	59
SLD-R.80.70	869	891	0.56	0.34	4	2.24	15	34
					6	3.36	33	45
					8	4.48	60	53
					10	5.60	97	59
SLD-R.80.75	869	941	0.60	0.36	4	2.40	15	35
					6	3.60	33	45
					8	4.80	60	52
					10	6.00	97	59
SLD-R.80.80	869	991	0.64	0.38	4	2.56	15	35
					6	3.84	33	45

*Area between blades

Technical Data Sheet –

Shaft Louvre Damper – Residential (SLD-R)

Type	Overall Width (mm)	Overall Height (mm)	Geometric Area (m²)	Free Area* (m²)	Velocity (m/s)	Flow rate (m³/s)	Pressure Drop (Pa) (incl. grille)	Noise Level (dBA)
SLD-R.80.85	869	1041	0.68	0.41	8	5.12	60	52
					10	6.40	97	59
					4	2.72	15	35
					6	4.08	33	45
					8	5.44	60	52
SLD-R.80.90	869	1091	0.72	0.43	10	6.80	97	59
					4	2.88	15	35
					6	4.32	33	45
					8	5.76	60	52
					10	7.20	97	59
SLD-R.80.95	869	1141	0.76	0.46	4	3.04	15	35
					6	4.56	33	45
					8	6.08	60	52
					10	7.60	97	59
					4	3.20	15	35
SLD-R.80.100	869	1191	0.80	0.48	6	4.80	33	45
					8	6.40	60	53
					10	8.00	97	59
					4	3.36	15	35
					6	5.04	33	45
SLD-R.80.105	869	1241	0.84	0.51	8	6.72	60	53
					10	8.40	97	59
					4	3.52	15	36
					6	5.28	33	46
					8	7.04	60	54
SLD-R.80.110	869	1291	0.88	0.53	10	8.80	97	59
					4	3.68	15	36
					6	5.52	33	46
					8	7.36	60	54
					10	9.20	97	59
SLD-R.80.115	869	1341	0.92	0.56	4	3.84	15	36
					6	5.76	33	46
					8	7.68	60	54
					10	9.60	97	59
					4	3.84	15	36
SLD-R.80.120	869	1391	0.96	0.58	6	5.76	33	46
					8	7.68	60	54
					10	9.60	97	59
					4	3.84	15	36
					6	5.76	33	46

*Area between blades