

VOLUME CONTROL Dampers :

Manual Control - Model : WB-DVCD

Motorised Control - Model : WB-DMD0

Note: Heavy duty models will be designated WB-DHVCD & WB-DHMD0, Low Leakage models as WB-LLDVCD & WB-LLDMD0

INTRO

To control and balance the air required in an HVAC system.

Tested to ANSI / AMCA500 to 10m/s and up to 2000pa.

CONSTRUCTION

Cold roll hot dipped galvanised steel casing, blade, shaft & linkage assembly.

Igus Iglide M250 maintenance & lubrication free bearings for shaft penetrations.

External linkages away from airstream for dampers with 2 or more blades.

Triple V groove blades for strength & natural seal closed function.

Standard with manual quadrant control arm, 150mm width with 25mm flanges and

Heavy Duty (HD) construction for L+H >1.8m

Other mounting types

-Slip joint (recommended for sizes < 350x350)

-TDF joint

OPTIONS

- Stainless steel or aluminum construction.

- Aluminum Aerofoil blades.

-Manual hand precision damper guide, Model WG

-Equipped with damper actuator for motorised control on Model WB-DMD0

- Low Leakage models with leakage <0.01cms/sqm at 1kpa class 1A as per AMCA500

ORDER NOTES

To indicate

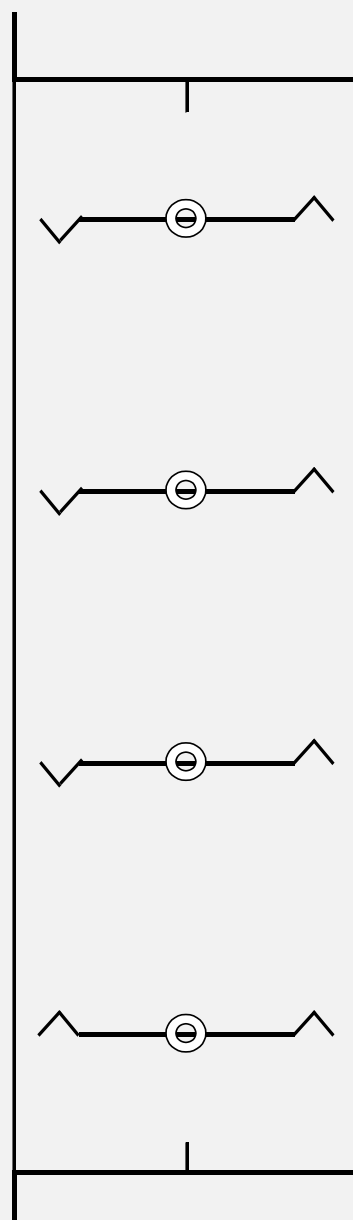
1 Type & Size of flange

2 Type of control

3 Duct size & damper width



model WB-DMD0 w Aerofoil blade



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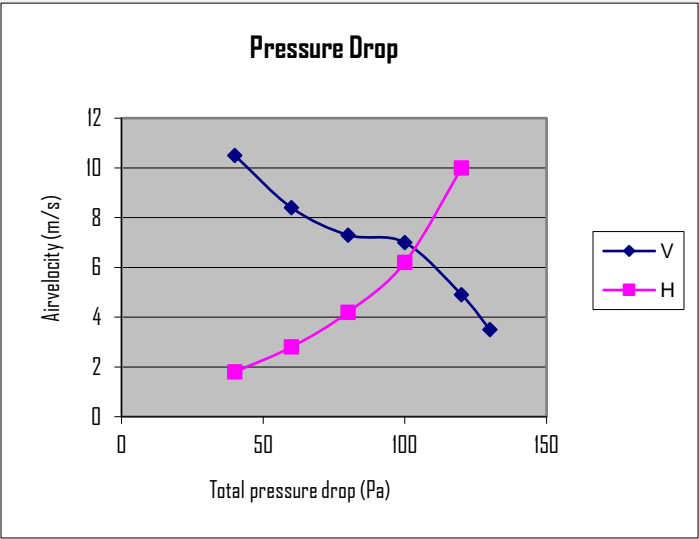
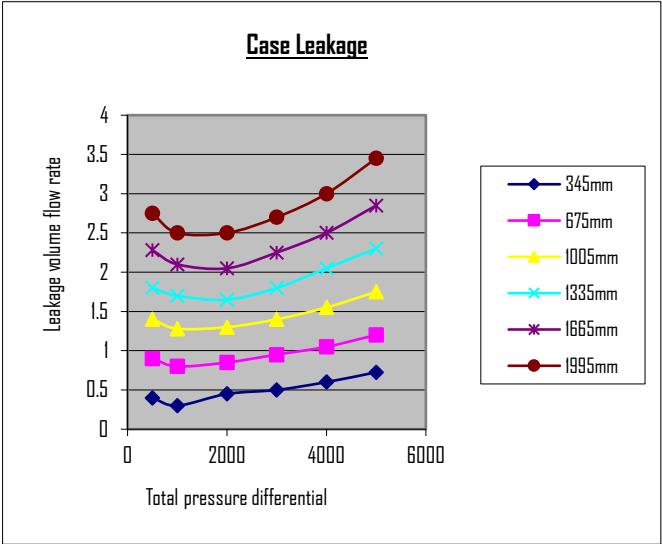
Note: Heavy duty models will be designated WB-DHVCD & WB-DHMD0, Low Leakage models as WB-LLDVCD & WB-LLDMD0

Technical Data

Pressure drop in Pa across vertically mounted damper in full open position

Velocity (m/s)	3	4	5	6	7	8	9	10	11	12	13	14	15
VCD height													
150mm Ht k=1.03	6	10	17	23	32	43	57	64	76	89	94	103	109
200mm Ht k=0.95	5	9	16	21	30	40	53	59	70	82	87	95	100
250mm Ht k=0.9	8	8.5	15	20	28	38	50	56	66	78	82	90	95
300mm Ht k=0.85	5	8	14	19	26	36	47	53	62	74	77	85	90
350mm Ht k=0.8	4	8	13	18	25	34	44	50	59	69	73	80	84
400mm Ht k=0.76	4	7	13	17	24	32	42	47	56	66	69	76	90
450mm Ht k=0.73	4	7	12	16	23	31	41	45	54	63	67	73	77
500mm Ht k=0.7	4	7	12	16	22	30	39	44	51	61	64	70	74
600mm Ht k=0.65	4	6	11	14	20	27	36	40	48	56	59	65	69
700mm Ht k=0.65	3	6	10	13	19	25	33	37	44	52	55	60	63
800mm Ht k=0.55	3	5	9	12	17	23	31	34	40	48	50	55	58

k = pressure loss coefficient



NON RETURN Dampers : Model WB-DNRD

Note: Heavy duty models will be designated WB-DHNRD, Low Leakage models as WB-LLDNRD

INTRO

Designed for one way airflow .
To prevent air from returning ,
the blades closes by gravity
when fan is turned off .

CONSTRUCTION

Galvanised sheet steel casing .
Aluminium blades .
Dampers having 2 or more
blades shall be coupled by
internal linkages .
Damper width is standard
150mm unless otherwise
requested .



MOUNTING TYPES

- 25mm** flange joint *
- Slip joint (for sizes>350x350)
- TDF joint
- Face mounted joint

* standard

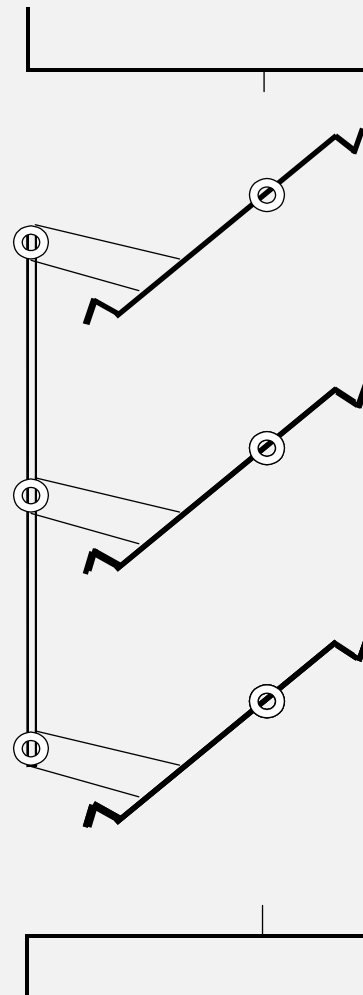
OPTIONS

- Stainless steel or aluminum construction .
- Option to convert to relief damper with counterbalance .

ORDER NOTES

To indicate

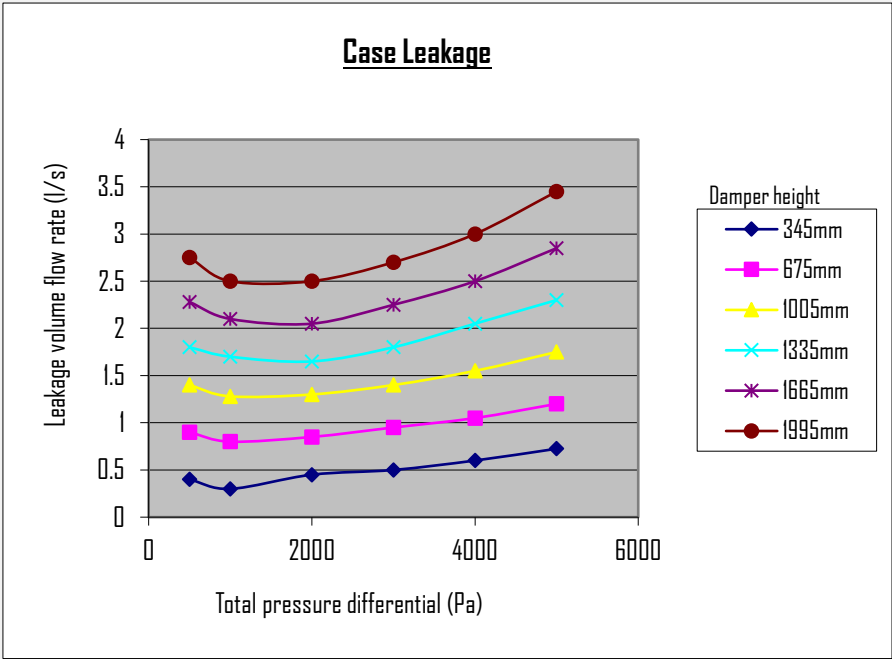
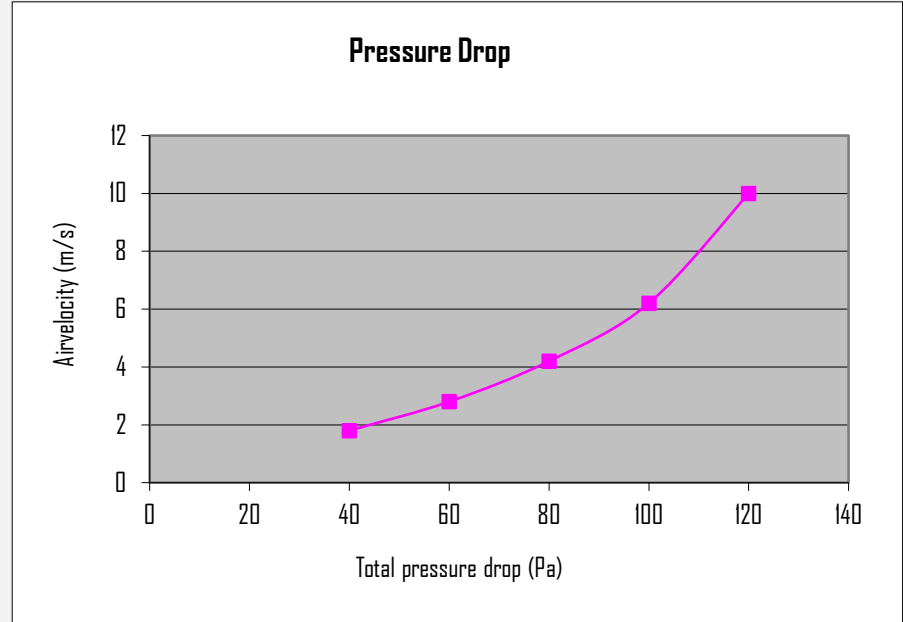
- 1 Type of flange
- 2 Size of flange
- 3 Duct size



NON RETURN Dampers : Model WB-DNRD

Note: Heavy duty models will be designated WB-DHNRD, Low Leakage models as WB-LLDNRD

TECHNICAL DATA



EXAMPLE

Data given
Size : 600width x 1005 height
Airvelocity : 7m/s
Total pressure differential (damper closed) : 2000Pa

TO FIND

Total pressure drop
Leakage volume rate

RESULT

100 Pa
1.3 l/s

PROJECT REFERENCES

AIR DISTRIBUTION PRODUCTS



Its not about superficial aesthetics, it's about a perfect unison of form function & reliability

	PROJECT TITLE	DATE	CONTRACTOR	Remarks	CONSULTANT / ARCHITECT
1	Crown Plaza Hotel Extension @ T3	2015	Powen Engrg P/L	Grilles & Dampers/Actuator	Surbana
2	OUE Tower 1 @ 6 Shenton Way	2015	Powen Engrg P/L	Grilles & Dampers/Actuator	KTPi
3	Downtown Line 3 (16 Station)	2015	Bintai Kindenko P/L	Grille/Alum Flex Duct	P.B
4	Mixed Development @ 15 Cairnhill Rd	2015	Powen Engrg P/L	G&D/Alum Flex Duct	Beca
5	Changi T1/T2 Gangway	2015	Trans Equatorial Engrg P/L	WPC Bargrille	
6	Katong Hotel @ 86 East Coast Rd	2015	Great Resources	Grilles & Dampers/Actuator	UPC
7	Lee Kong Chian(Yunnan)@ NTU	2015	Bintai Kindenko P/L	VAV Box	Meinhardt
8	Lee Kong Chian(Novena)@ Mandalay Rd	2015	Bintai Kindenko P/L	VAV Box	Meinhardt
9	Duo @ Rochor/Beach Rd/Ophir Rd	2015	Kurihara Kogyo Co.Ltd	Grilles & Dampers/Actuator	Beca
10	Amore @ Punggol Central	2015	Natural Cool A/C & Engrg P/L	Grilles & Dampers/Actuator	United Project
11	PLB @ T4	2015	Natural Cool A/C & Engrg P/L	Grilles & Dampers	CPG
12	Thomson Three Condo @ Brighthill Drive	2015	Kembla A/C P/L	Grilles & Dampers/Actuator	
13	Link Hotel @ Tiong Bahru	2015	Supersonic A/C Elect.Engrg P/L	Grilles & Dampers/Actuator	
14	The Scotts Tower @ 38 Scotts Rd	2015	Co-AI Engrg Intergrated Services	Grilles & Dampers	
15	The Glade @ Bedok Rise	2016	Powen Engrg P/L	Grilles & Dampers/Actuator	Beca
16	Goodwood Grand @ 28 Balmoral Rd	2016	Natural Cool A/C & Engrg P/L	Grilles & Dampers	Meinhardt
17	DSO @ 12 Science Park Drive	2016	Shan Ming A/C	Aluminum Flex Duct	
18	Bedok Integrated Complex	2016	Bintai Kindenko P/L	VAV Box/Grille & Dampers/Actuator	Rankine & Hill
19	Downtown East @ Pasir Ris Close	2016	Natural Cool A/C & Engrg P/L	Grilles & Dampers/Actuator	Beca
20	Mapletree @ Tai Seng	2016	Powen Engrg P/L	VAV Box/Grille & Dampers/Actuator	Bescon
21	GSK HQ @ Vista Exchange Green	2016	Powen Engrg P/L	VAV Box/Grille & Dampers/Actuator	Squire Mech
22	Kampung Admiralty@Woodlands Close	2016	Powen Engrg P/L	VAV Box/Grille & Dampers/Actuator	Aecom
23	Jurong Town Hall	2016	Sing Wah Enterprise P/L	Grilles & Dampers/Actuator	Parson
24	Pioneer Polyclinic @Jurong West St61	2016	Bintai Kindenko P/L	Grilles & Dampers/Actuator	Mott Mac
25	St Joseph Nursing Home@Jurong West	2016	Natural Cool A/C & Engrg P/L	Grilles & Dampers/Actuator	Bescon
26	NorthPoint Shopping@Yishun Ave 2	2016	Bintai Kindenko P/L	Grilles & Dampers/Actuator	Squire Mech
27	The Gallery Hotel@Nanson Rd	2016	General Thermal Engrg P/L	Grilles & Dampers/Actuator	JRP
28	Coco Palms Condo	2016	SAS M&E P/L	Grilles & Dampers/Actuator	Meinhardt
29	Clifford Center	2016	Powen Engrg P/L	Grilles & Dampers/Actuator	JRP
30	Singapore Tourism Board	2016	Siew Engineering P/L	VAV Box	
31	NTU SPC L5	2016	Siew Engineering P/L	VAV Box/Grille & Dampers/Actuator	
32	NTU EMB L7	2016	Siew Engineering P/L	VAV Box/Grille & Dampers/Actuator	

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33	HDB Punggol NC1	2016	Great Resources	Grille & Dampers/Actuator	Bescon
34	AMK THK Hospital	2017	Quantum Automation P/L	VAV Box	
35	Bayview Hotel@Bencoolen Street	2017	Accon Engrg P/L	Grille & Dampers/Actuator	EWC
36	Farrer Park Hotel	2017	General Thermal Engrg P/L	Grille & Dampers	JRP
37	Raffles Hospital Extension	2017	Power Engrg P/L	VAV Box/Grille & Dampers/Actuator	JRP
38	ST Omega @ AMK Electronics Park Rd	2017	Power Engrg P/L	Grille & Dampers/Actuator	BELMAC
39	JTC Space @ 14 Tuas Ave 1	2017	Bintai Kindenko P/L	Grille & Dampers/Actuator	Aecom
40	The Creek Condo@Toh Tuck Road	2017	Great Resources M&E	Grille & Dampers	KTP
41	Shaw Center/Shaw House	2017	Natural Cool A/C & Engrg P/L	Grille & Dampers/Actuator	Bescon
42	Data Centre @ 27 Tampines St 92	2017	Amcool P/L	Grille & Dampers/Actuator	Plan One Engrg Services
43	Data Centre @ 21 Defu Ave 1	2017	Amcool P/L	Grille & Dampers/Actuator	Plan One Engrg Services
44	Data Centre @ 20 Tampines St 92	2017	Amcool P/L	Grille & Dampers/Actuator	CPG
45	German European Sch@Dairy Farm Rd	2017	Great Resources M&E	Grille & Dampers/Actuator	Beca
46	Changi Airport PLB T1E	2017	Natural Cool A/C & Engrg P/L	Grille & Dampers	J.Roger Preston
47	Bus Depot@Seletar RD299	2017	Natural Cool A/C & Engrg P/L	Grille & Dampers/Actuator	Rankine & Hill
48	1&3 Kallang Junction	2017	Accon Engrg P/L	Grille & Dampers/Actuator	Gims & Associate P/L
49	Proxima@Gambas	2017	Accon Engrg P/L	Grille & Dampers/Actuator	PDC Consultant Engrg
50	Bus Depot@Ulu Pandan RD300	2017	Natural Cool A/C & Engrg P/L	Grille & Dampers/Actuator	Rankine & Hill
51	Housing Development@Canberra Link	2017	Natural Cool A/C & Engrg P/L	Grille & Dampers/Actuator	Bescon
52	Maamunagau Maldives	2018	A Venture Engineering Pte Ltd	Grille & Dampers/Actuator	Ace-Tech Design Pte Ltd
53	National Archives Of Spore	2018	BMS Engrg & Trading P/L	VAV Box	Squire Mech
54	Warehouse @ Bulim Ave	2018	Kurihara Kogyo Co;Ltd	Grille & Dampers/Actuator	Squire Mech
55	Stars Of Kovan Condo	2018	Power Engrg P/L	Grille & Dampers	T.Y.Lin International P/L
56	68 Residence (Myanmar)	2018	Bintai Kindenko P/L	Grille & Dampers/Actuator	
57	Alps Residence	2018	Great Resources M&E	Grille & Dampers/Actuator	UPC Consultant
58	JTC Furniture Hub	2018	Great Resources M&E	VAV Box/Grille & Dampers/Actuator	Arup Spore P/L
59	Boys Complex	2018	Great Resources M&E	Grille & Dampers/Actuator	CPG
60	No1 Gul St5	2018	Power Engrg P/L	Grille & Dampers/Actuator	Neam Solution/Vincent Han A
61	45 Leng Kee Rd	2018	Natural Cool A/C & Engrg P/L	Grille & Dampers/Actuator	Tritont Consultant LLP
62	Data Centre @ 15 Defu Ave 1	2018	Amcool P/L	Grille & Dampers/Actuator	Plan-One Building Services
63	Paterson Services Apt	2018	D.I.S A/C & Elect P/L	WPC Bargrille/Grille	JRP
64	YTC office @ Peninsula Plaza	2018	Accon Engrg P/L	WPC Bargrille/Grille	CMP Consultants P/L

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65	Bollore Blue Hub @ Sunview Rd	2018	Sing Wah Enterprise P/L	Bspot/Grille & Dampers/Actuator	
66	Marina East Desailination Plant	2018	Bintai Kindenko P/L	Grille & Dampers/Actuator	Mott Macdonald Consultant
67	Outram Community Hospital	2018	Bintai Kindenko P/L	Dampers/PIR Duct	Surbana Jurong Consultant P/L
68	SMU	2019	Quantun Automation P/L	VAV Box	
69	Toa Payoh West CC	2019	Narural Cool A/C&Engrg P/L	Grille & Dampers	HT M&E Consultant
70	The Verge@2 Serangoon Road	2019	Power Engrg P/L	Grille & Dampers/Actuator	KTPI
71	Spore Exam & Accessment Board	2019	BMS Engrg & Trading P/L	VAV Box	
72	Woodland Regional Bus Interchange	2019	Kin Xin Engrg P/L	Grille & Dampers/Actuator	Elead Associate P/L
73	Madrasah Education Institute@toa payoh	2019	Luova Engrg P/L	Grille & Dampers	
74	Huamin Pri Sch	2019	Luova Engrg P/L	Grille & Dampers	Squire Mech P/L
75	Naval Base Pri Sch	2019	Luova Engrg P/L	Grille & Dampers	Squire Mech P/L
76	Orchid Park Sec Sch	2019	Luova Engrg P/L	Grille & Dampers	Squire Mech P/L
77	Tampines Pri Sch	2019	Luova Engrg P/L	Grille & Dampers	Squire Mech P/L
78	PSA @ 34 Harbour Drive	2019	Power Engrg P/L	VAV Box/Grille & Damper	Surbana Jurong Consultant
79	Temasek Poly	2019	Kin Xin Engrg P/L	VAV Box	
80	Punggol Pri Sch	2019	Natural Cool A/C & Engrg P/L	Grille & Dampers	Arup Spore P/L
81	Chin Cheng Polyclinics	2020	M&C Engrg&Trading P/L	VAV Box	
82	JTC Logistic Hub@Gul Circle	2020	Kimly Construction P/L	Grille & Dampers	Meinhardt
83	Changi T2	2020	A&L Engrg P/L	VAV Box	CAG
84	SJSM @ 30 Dover Ave	2021	Natural Cool A/C & Engrg P/L	Grille & Dampers	Squire Mech P/L
85	Senja Nursing Home	2021	Yitac(S) P/L	VAV Box/Grille & Dampers	Surbana Jurong Consultant
86	JTC-WNC @ Woodland Ave 4&9	2021	Power Engrg P/L	Grille & Dampers	WSP Consultancy P/L
87	Sembawang Sports Hub	2021	Great Resources M&E	VAV Box/Grille & Dampers	Aecom
88	Tee Yih Jia	2021	Great Resources M&E	Grille & Dampers	Surbana Jurong Consultant
89	Fixed Gangway@ T1/T2/T3	2022	PBT Engrg	WPC Bar Grille	JRP
90	Condo @ 21 Stirling Road	2022	Great Resources M&E	Grille & Dampers	Rankine & Hill
91	JTC-MSRF	2022	Sing Wah Enterprise P/L	Grille & Dampers	JRP
92	Mandai Bird Park	2023	Kurihara Kogyo Co Ltd	Grille & Dampers	Surbana Jurong Consultant
93	Belgravia Green Condo(Ph 2)	2023	Natural Cool A/C & Engrg P/L	Grille & Dampers	HPX Consulting Engineer
94	Midtown @ Beach Road	2023	Great Resources M&E	VAV Box/Grille & Dampers	Meinhardt
95	Changi T2 Extension	2023	Sing Wah Enterprise P/L	VAV Box/Grille & Dampers	JRP
96	Data Centre @ Loyang	2023	Amcool P/L	Grille & Dampers	

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	PROJECT TITLE	DATE	CONTRACTOR	Remarks	CONSULTANT / ARCHITECT
97	Verdale Condo (JJK)	2023	Great Resources M&E	Grille & Dampers	UPC United Project Consulta
98	Pan Pacific Orchard	2023	Powen Engrg P/L	Grille & Dampers	Beca
99	National Skin Center	2023	Thermal Private Limited	Dampers	WSP Consultancy P/L
100	9 Cuscaden Road Condo	2023	Powen Engrg P/L	Grille & Dampers	GIMS Consultant
101	SJ Campus	2023	Bintai Kindenko P/L	Floor Bargrille	
102	Sky Everton	2023	Powen Engrg P/L	Grille & Dampers	Belmacs Consultant
103	Biopolis	2023	Natural Cool A/C & Engrg P/L	Grille & Dampers	WSP Consultant
104	155 Kallang Way	2023	Sing Wah Enterprise P/L	Grille & Dampers	WSP Consultant
105	Trinity Church@CCK	2023	Natural Cool A/C & Engrg P/L	Grille & Dampers	UPC United Project Consulta
106	Parc Clematis	2023	Great Resources M&E	Grille & Dampers	Rankine & Hill
107	IOI Central/Boulevard Tower	2024	Kurihara Kogyo Co Ltd	Grille & Dampers	JRP
108	Home Team @ Mandai Road	2024	Great Resources M&E	Grille & Dampers	CPG Consultant P/L
109	A&A Business Pk Dev@1 Venture Ave	2024	YinSheng Engrg P/L	Grille & Dampers	
110	31 Fernvale Lane (Condo)	2024	Great Resources M&E	Grille & Dampers	JRP
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PROJECT REFERENCES

Highlights

It's not about superficial aesthetics, it's about a perfect unison of form function & reliability

AIR DISTRIBUTION PRODUCTS



Over the past decades, we have corrected, enhanced and are still constantly re-engineering our products, services & operations to meet with the ever demanding and changing economy.

This has led us through numerous projects of different fields & functions. From small cafes to skyscrapers, bomb shelters to sewage plants, showrooms to outdoor atriums & Integrated Resorts.

Our Products have been put to test and have humbly met **form, function & reliability**.

