

Cabinet Type Multideck Full Height

Model Designation IB – New 2015

File Reference

Document Issue				
1	19-10-15	NM	First Issue New 2015 spec	
2	27-01-16	NM	Cabinet Codes Added	
3	15-03-16	GL	Commissioning points updated.	
4	13-06-17	NM	Nett Cooling Effect Updated.	
5	09-03-18	NM	GEN 3 Data Added.	
6	13-03-18	NM	GEN 3 Data updated	
7	07-06-18	IP	GEN 3 Refrigerant Charge updated	
8	07-08-18	NM	Commissioning point updated	
9	14-08-18	IP	GEN 3 Flow rates updated	
10	9-10-18	IP	GEN 3 6K Flow rates amended	
11	7-11-19	IP	IBB added to listings	

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Cabinet Technical Data Sheet – IB HFC

Product Type	Meat 3M0*** / (Dairy 3M1)
Product Temperature	-1 /+4 °C / (-1 /+5 °C)
Maximum Design Ambient	25°C @ 60%RH

Case Length [m]	3.75	2.50	1.87/(WAE)	1.25	2.18 WAE
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Refrigeration Data

Refrigeration Duty (per 24hrs) [kW] ISO3	5.23	3.42	2.57	1.71	3.10
Refrigeration Duty (per 24hrs) [kW] ISO0	4.18	2.74	2.06	1.37	2.48
Evaporating Temperature [°C] HFC	-6	-6	-6	-6	-6
Net Environment Cooling Effect [kW]	3.52	2.35	1.76	1.17	2.05
R407 T2 Orifice Size	4	3	2	1	3
R407 AKV	10-6	10-5	10-4	10-3	10-5
R404A T2 Orifice Size	4	3	3	2	3
R404A AKV	10-6	10-6	10-5	10-4	10-5
Evaporator Liquid Capacity @ 25% R404A* [kg]	6.0	3.9	2.9	1.8	3.4
Refrigeration Pipe Tail – Liquid HFC	3/8"	3/8"	3/8"	3/8"	3/8"
Refrigeration Pipe Tail – Suction HFC	7/8"	7/8"	7/8"	7/8"	7/8"

Electrical Data (@ 230V 50Hz)

	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps
Fans (EC EBM)	42	0.18	28	0.12	21	0.09	14	0.06	28	0.12
Solenoid Valve / Controller	10	0.04	10	0.04	10	0.04	10	0.04	10	0.04
Canopy Lights	66	0.29	44	0.19	33	0.14	22	0.10	38	0.17
Under Shelf Lights – If Fitted	138	0.60	92	0.40	53	0.23	43	0.19	48	0.21
Maximum Load – Off Cycle Defrost	256	1.11	174	0.75	117	0.50	89	0.38	124	0.53

Miscellaneous Data

Refrigeration Connections	Top of Cabinet LHS
Electrical Connection	Underside of Cabinet LHS

Set-Up Data** O/C Defrost

	Meat	(Dairy)
Cut in Temperature [°C]	2	3
Cut out Temperature [°C]	1	2
N° Defrosts (per 24hrs)	8	8
Maximum Defrost Time [mins]	45	45
Defrost Termination Temp (air off) [°C]	8	8
Drain Down Time [mins]	1	1
Fans in Defrost	On	On
Cabinet Temperature Ratio (%)	50	50
Superheat [K]	5	5

NOTES! ** Set-up data is for guidance only. Final settings to be determined by commissioning contractor.
 *** M0 proposed En temperature class for fresh meat -1/4°C

Cabinet Technical Data Sheet – IB R744

Product Type	Meat 3M0*** / (Dairy 3M1)
Product Temperature	-1 /+4 °C / (-1 /+5 °C)
Maximum Design Ambient	25°C @ 60%RH

Case Length [m]	3.75	2.50	1.87/(WAE)	1.25	2.18 WAE
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Refrigeration Data

Refrigeration Duty (per 24hrs) [kW] ISO3	5.23	3.42	2.57	1.71	3.10					
Refrigeration Duty (per 24hrs) [kW] ISO0	4.18	2.74	2.06	1.37	2.48					
Evaporating Temperature [°C] R744	-3	-3	-3	-3	-3					
Net Environment Cooling Effect [kW]	3.52	2.35	1.76	1.17	2.05					
R744 AKVH	10-5	10-4	10-4	10-3	10-4					
Evaporator Liquid Capacity @ 25% R744* [kg]	3.27	2.13	1.56	1.09	1.85					
Evaporator Liquid Capacity @ 90% R744* [kg]	11.78	7.66	5.6	3.92	6.67					
Refrigeration Pipe Tail – Liquid HFC and R744	3/8"	3/8"	3/8"	3/8"	3/8"					
Refrigeration Pipe Tail – Suction R744	1/2"	1/2"	1/2"	1/2"	1/2"					
	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps

Electrical Data (@ 230V 50Hz)

Fans (EC EBM)	42	0.18	28	0.12	21	0.09	14	0.06	28	0.12
Solenoid Valve / Controller	10	0.04	10	0.04	10	0.04	10	0.04	10	0.04
Canopy Lights	66	0.29	44	0.19	33	0.14	22	0.10	38	0.17
Under Shelf Lights – If Fitted	138	0.60	92	0.40	53	0.23	43	0.19	48	0.21
Maximum Load – Off Cycle Defrost	256	1.11	174	0.75	117	0.50	89	0.38	124	0.53

Miscellaneous Data

Refrigeration Connections	Top of Cabinet LHS
Electrical Connection	Underside of Cabinet LHS

Set-Up Data** O/C Defrost

	Meat	(Dairy)
Cut in Temperature [°C]	2	3
Cut out Temperature [°C]	1	2
N° Defrosts (per 24hrs)	8	8
Maximum Defrost Time [mins]	45	45
Defrost Termination Temp (air off) [°C]	8	8
Drain Down Time [mins]	1	1
Fans in Defrost	On	On
Cabinet Temperature Ratio (%)	50	50
Superheat [K]	5	5

NOTES! ** Set-up data is for guidance only. Final settings to be determined by commissioning contractor.
 *** M0 proposed En temperature class for fresh meat -1/4°C

Cabinet Technical Data Sheet – IB WATER COOLED GEN 1

Product Type	Meat 3M0
Product Temperature	-1 /+4 °C
Maximum Design Ambient	25°C @ 60% RH

Case Length [m]	3.75	2.50	1.87	1.25
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Refrigeration Data

Nett Environmental Cooling Effect	1.91	0.78	0.96	0.39
Refrigerant Charge Per System R1270	650g	430g	650g	470g

Electrical Data (@ 230V 50Hz)

	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps
Fans (EC EBM)	42	0.18	28	0.12	21	0.09	14	0.06
Controller	10	0.04	10	0.04	10	0.04	10	0.04
Lights	66	0.24	44	0.19	32	0.14	22	0.10
Condensing unit	1580	6.9	1226	5.3	790	3.4	613	2.7
Maximum Load – Off Cycle Defrost	1689	7.37	1302	5.62	843	3.63	656	2.88

Miscellaneous Data

Total Heat Rejection THR [KW]	7.30	5.05	3.65	2.52
THR (Water only) [KW]	6.49	4.23	3.25	2.12
THR (Air only) [KW]	0.8	0.8	0.4	0.4
Plate Heat Exchanger [Kpa] each	1 @ 7.5	1 @ 7.5	1 @ 1.31	1 @ 1.31
Water inlet temperature			18°C	
Water outlet temperature			24°C	
Glycol Flow Rate [Kg/S]**	0.2843	0.1858	0.1422	0.0929
Water Flow Rate [Kg/S]**	0.2589	0.1692	0.1295	0.0846
Drain Outlet			32mm Plastic	
Chilled Water Connections			22mm	
Condensate Volume (3M0 -1 +4°C)			44 Liters (Per Linear Meter per 24 Hours)	
Condensate Volume (3M1 -1 +5°C)			23 Liters (Per Linear Meter per 24 Hours)	

Set-Up Data** O/C Defrost

	Meat 3.75 & 2.50	Meat 1.87 & 1.25
Cut in Temperature [°C]	4	4
Cut out Temperature [°C]	2	2
Anti Cycle Time (Seconds)	180	180
Lag Comp Delay (Seconds)	180	0
Cabinet Temperature Ratio (%)	40	40
N° Defrosts (per 24hrs)	8	8
Maximum Defrost Time [mins]	45	45
Defrost Termination Temp (air off) [°C]	8	8
Drain Down Time [mins]	1	1
Fans in Defrost	On	On
Integral Control	Basic	Basic

NOTES! * 12/12 Trading Conditions

** Set-up data is for guidance only. Final settings to be determined by commissioning contractor.

*** Flow rate for Glycol based on 27% @ 20°C from ASHRAE = 3.8095 KJ/(KG-K)

**** Flow rate for water @ 20°C (http://www.engineeringtoolbox.com/water-thermal-properties-d_162.html)

Cabinet Technical Data Sheet – IB SECONDARY GEN 2

Product Type	F&V 3M1
Product Temperature	-1 /+5 °C
Maximum Design Ambient	25°C @ 60%RH

Case Length [m]	3.75	2.50	1.87	2.18	1.25
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Refrigeration Data

Refrigeration Duty (per 24hrs) [kW] ISO3	5.23	3.42	2.57	1.71	3.10
Refrigeration Duty (per 24hrs) [kW] ISO0	4.18	2.74	2.06	1.37	2.48
Evaporating Temperature [°C]	-6	-6	-6	-6	-6
Nett Environment Cooling Effect [kW]	3.52	2.35	1.76	1.17	2.05
Flow Rate kg/s	0.2543	0.1694	0.1272	0.1694	0.0847
Pressure Drop Through Cabinet kpa	65.22	29.77	15.00	22.37	14.89
Evaporator Liquid Capacity 100% DTX @ 27% L	14.7	9.5	6.9	8.2	4.9
Refrigeration Pipe Tail – Inlet	22mm	22mm	22mm	22mm	22mm
Refrigeration Pipe Tail – Outlet	22mm	22mm	22mm	22mm	22mm

Electrical Data (@ 230V 50Hz)

	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps
Fans (EC EBM)	42	0.18	28	0.12	21	0.09	21	0.09	14	0.06
Solenoid Valve / Controller	10	0.04	10	0.04	10	0.04	10	0.04	10	0.04
Lights	66	0.24	44	0.19	32	0.14	38	0.16	22	0.10
Maximum Load – Off Cycle Defrost	118	0.46	82	0.35	63	0.27	69	0.29	46	0.2

Miscellaneous Data

Refrigeration Connections	Top of Cabinet LHS
Electrical Connection	Top of Cabinet LHS

Set-Up Data** O/C Defrost

	Meat	Chilled	Cooled
Cut in Temperature [°C]	2	3	10
Cut out Temperature [°C]	1	2	9
N° Defrosts (per 24hrs)	8	8	8
Maximum Defrost Time [mins]	45	45	45
Defrost Termination Temp (air off) [°C]	8	8	8
Drain Down Time [mins]	1	1	1
Fans in Defrost	On	On	On
Cabinet Temperature Ratio (%)	50	50	50
Coil TD [K]	6	6	6
Control Method	Basic	Basic	Basic

NOTES! * 12/12 Trading Conditions
 ** Set-up data is for guidance only. Final settings to be determined by commissioning contractor.
 *** Flow rate for Glycol based on 27% @ 20°C from ASHRAE = 3.8095 KJ/(KG-K)
 **** Flow rate for water @ 20°C (http://www.engineeringtoolbox.com/water-thermal-properties-d_162.html)

Cabinet Technical Data Sheet – IB WATER COOLED GEN 3

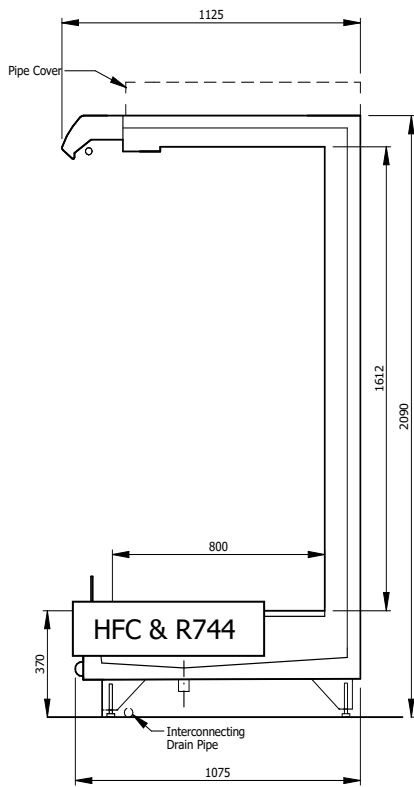
1. Product Type	a. Meat 3M0									
Product Temperature	-1 /+4 °C									
Maximum Design Ambient	25°C @ 60% RH									
Case Length [m]	3.75	2.50	1.87	2.18	1.25					
Refrigeration Data										
Nett Environmental Cooling Effect	2.611	1.519	1.306	1.418	0.762					
Refrigerant Charge Per System R1270	850g	630g	850g	880g	500g					
Electrical Data (@ 230V 50Hz)	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps
Fans (EC EBM)	42	0.18	28	0.12	21	0.09	28	0.12	14	0.06
Controller	10	0.04	10	0.04	10	0.04	10	0.04	10	0.04
Lights LED	54	0.23	36	0.16	24	0.10	32	0.14	22	0.09
Condensing unit	3086	13.4	2362	10.3	1543	6.71	2362	10.3	1181	5.13
Maximum Load – Off Cycle Defrost	3192	13.9	2436	10.6	1598	6.95	2432	10.6	1227	5.33
Engineering Data - Common										
Total Heat Rejection THR [KW]	8.73	6.15	4.38	5.12	3.08					
Plate Heat Exchanger [Kpa] each	1 @ 12	1 @ 10	1 @ 3.79	1 @ 3.79	1 @ 5.8					
Drain Outlet	32mm Plastic									
Chilled Water Connections	22mm									
Condensate Volume (3M0 +4 ^o)	44ltrs (Per Linear Meter Per 24hrs)									
Condensate Volume (3M1 +5 ^o)	23ltrs (Per Linear Meter Per 24hrs)									
Engineering Data										
THR (Water only) [KW]	8.055	5.475	4.05	3.76	2.75					
THR (Air only) [KW]	0.675	0.675	0.33	0.33	0.33					
Engineering Data; Flow Rates										
Inlet Temp 41°C - Outlet temp 46°C Glycol 15% Flow Rate [Kg/S]***	0.3985	0.2709	0.2004	0.2370	0.1361					
Inlet Temp 40°C - Outlet temp 46°C Glycol 15% Flow Rate [Kg/S]***	0.3321	0.2257	0.167	0.1975	0.1134					
Set-Up Data** O/C Defrost	Meat 3.75 & 2.50	Meat 2.18, 1.87 & 1.25	Dairy/Chilled 3.75 & 2.5	F & V Produce 3.75 & 2.5						
Cut in Temperature [°C]	3	2	5	10						
Cut out Temperature [°C]	1	0	3	8						
Anti-Cycle Time [Seconds]	180	180	180	180						
Lag Comp Delay [Seconds]	180	0	180	180						
Cabinet Temperature Ratio (%)	40	40	50	50						
N° Defrosts (per 24hrs)	8	8	8	8						
Maximum Defrost Time [mins]	45	45	45	45						
Defrost Termination Temp (air off) [°C]	8	8	8	8						
Drain Down Time [mins]	1	1	1	1						
Fans in Defrost	On	On	On	On						
Integral Control	Basic	Basic	Basic	Basic						

NOTES! * 12/12 Trading Conditions

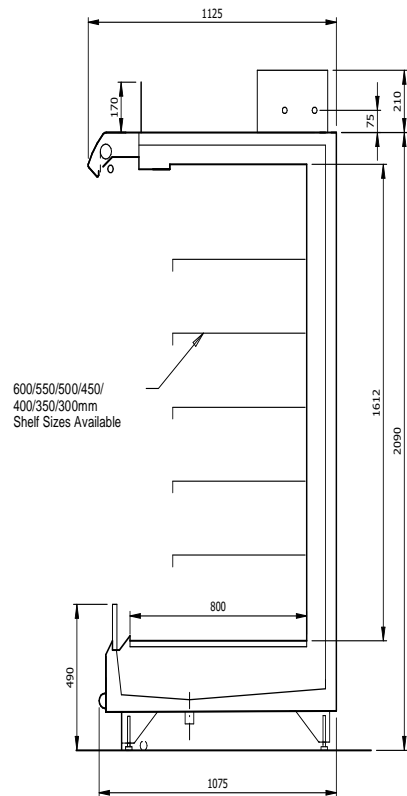
** Set-up data is for guidance only. Final settings to be determined by commissioning contractor.

*** Flow rate for Glycol based on 15% @ 40°C = 4.0425 KJ/(KG-K)

Section Drawing – IB

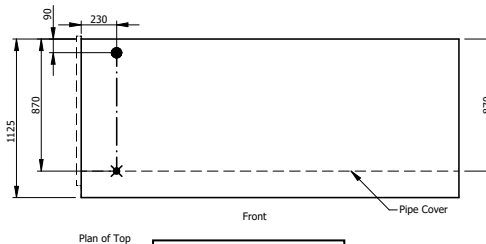
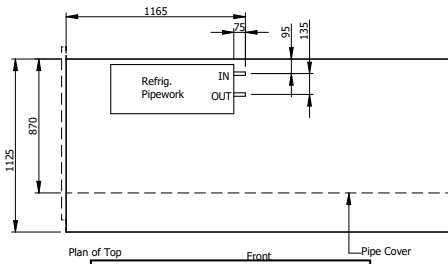
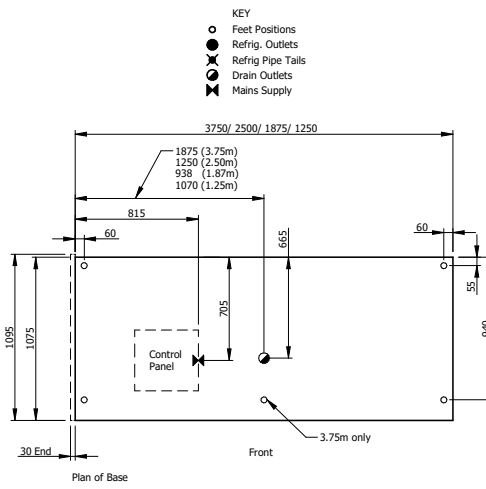
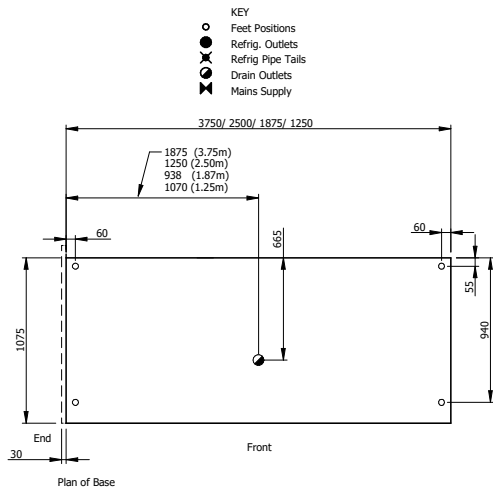


Ref:- DS1242



Ref:- DS1264-01

Plan Drawing – IB



SECONDARY GEN 2

Ref DP1264-01

HFC & R744

Ref DP1242

Cabinet Technical Data Sheet – Cabinet Models Covered

Cabinet Model	Date Added	HFC Refrigerant	CO2 Refrigerant	Water Cooled GEN 1	Water Cooled GEN 3	Secondary GEN 2
IBA7S00149	06.01.16	√	√			√
IBA6S00150	06.01.16	√	√			√
IBA4S00151	06.01.16	√	√			√
IBB	7-11-19	√				

Cabinet Code Template

Example of CRE case code letter designation:-

IBA7S00360-FFF

I – Model Identification
B – Model Identification
A – Design Revision
7 – Length
S – Run Position
0 – Unique Identifier
0 – Unique Identifier
3 – Unique Identifier
6 – Unique Identifier
0 – Unique Identifier

Length Codes

1 – 1.25m
2 – 1.5m
3 – 1.7m
4 – 1.87m
5 – 2.10m
6 – 2.5m
7 – 3.75m

Run Position

S – Straight
W – End Case