

**Cabinet Type**

**Combined Half Glass over Well**

**Model Designation**

**GCA – New 2015**

**File Reference**

**Document Issue**

1	02-10-15	NM	First Issue New 2015 spec
2	05-10-15	NM	Additional Models Added
3	10-07-16	NM	GEN 3 Data Added
4	13-09-16	NM	ISO 0 data updated
5	18-11-16	GL	Set points for Gen 1 & 3 added & adjusted
6	25-02-17	NM	GEN 3 Data updated
7	12-04-17	NM	Danfoss Display Temperature Offset Option Added
8	22-02-18	NM	R449A Orifice size added
9	10-05-18	IP	Gen 3 Refrigerant Charge Amendment
10	23-05-18	NM	ISO23953 (8) Run time duty Added Fan Restart Temperature Setting Updated
11	30-05-18	NM	R744 3.75M Orifice Size Updated
12	14-8-18	IP	GEN 3 Flow rates updated
13	15-08-18	NM	Commissioning data updated R744 Orifice size updated

cabinet **TECHNICAL DATA**

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## Cabinet Technical Data Sheet – GCA HFC

Product Type	Frozen Food
Product Temperature	-18°C / -22°C
Maximum Design Ambient	ISO 3 25°C 60%RH
Store Design Ambient	ISO 0 20°C 50%RH

<b>Case Length [m]</b>	<b>3.75</b>	<b>2.50</b>	<b>1.87</b>
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### Refrigeration Data

Refrigeration Duty (per 24hrs) [kW] ISO3	2.55	1.70	1.27
Refrigeration Duty (per 24hrs) [kW] ISO0	2.42	1.62	1.21
Refrigeration Duty (23953 8 Run Duty)	2.75	1.83	1.37
Evaporating Temperature [°C] – L1	-35	-35	-35
Nett Environment Cooling Effect [kW]	0.66	0.44	0.33
R404A TS 2 Expansion Valve Orifice Size	3	2	2
R404A AKV Expansion Valve Size	10-5	10-4	10.3
R407F AKV Expansion Valve Size	10-4	10-3	10.2
R449A AKV Expansion Valve Size	10-4	10-3	10.2
Evaporator Liquid Capacity @ 25% R404A [kg]	4.0	2.6	2.0
Refrigeration Pipe Tail – Liquid	3/8"	3/8"	3/8"
Refrigeration Pipe Tail – Suction	7/8"	7/8"	7/8"

### Electrical Data (@ 230V 50Hz)

	Watts	Amps	Watts	Amps	Watts	Amps
Defrost Heaters	4000	17.39	2800	12.17	2000	8.69
Fans	171	0.7	126	0.5	98	0.4
Trim Heaters	244	1.0	163	0.7	117	0.5
Frame Heaters	543	2.36	330	1.43	281	1.22
Solenoid Valve / Controller	10	0.04	10	0.04	10	0.04
Lights Phillips LED's Frame and Under Belly	138	0.6	92	0.4	71	0.31
Maximum Load – Electric Defrost	5076	22.06	3521	15.3	2577	11.2

### Electrical Data (@400V 3ph 50Hz)

	L1	L2	L3	L1	L2	L3	L1	L2	L3
Maximum Load – Electric Defrost	4.7	9	9	3.1	6	6	2.4	4.4	4.4

### Miscellaneous Data

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

### Set-Up Data\*\*

	Electric Defrost
Cut in Temperature [°C]	-23
Cut out Temperature [°C]	-24
N° Defrosts (per 24hrs)	2
Maximum Defrost Time [mins]	60
Defrost Termination Temp (Def. Probe [°C])	10
Drain Down Time [mins]	5
Fans in Defrost	Off (Top off Bottom Slow)
Cabinet Temperature Ratio (%)	50
Danfoss Display Temperature Correction (r04 K)	3 (Optional)
Superheat [K]	5
RDM Valve Response On	10
RDM Valve Response Off	10
Trim Heater Control (%)	100
Fan Start Delay after Defrost	10 Mins
Fan Start Temperature after defrost	-30°C

NOTES!

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

## Cabinet Technical Data Sheet – GCA CO2

Product Type	Frozen Food
Product Temperature	-18°C / -22°C
Maximum Design Ambient	ISO 3 25°C 60%RH
Store Design Ambient	ISO 0 20°C 50%RH

<b>Case Length [m]</b>	<b>3.75</b>	<b>2.50</b>	<b>1.87</b>
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### Refrigeration Data

Refrigeration Duty (per 24hrs) [kW] ISO3	2.55	1.70	1.27
Refrigeration Duty (per 24hrs) [kW] ISO0	2.42	1.62	1.21
Refrigeration Duty (23953 8 Run Duty)	2.75	1.83	1.37
Evaporating Temperature [°C] – L1	-32	-32	-32
Nett Environment Cooling Effect [kW]	0.66	0.44	0.33
R744 AKV Expansion Valve Orifice Size	3	2	1
Evaporator Liquid Capacity @ 90% R744 [kg]	9.13	5.93	4.33
Evaporator Liquid Capacity @ 25% R744 [kg]	2.54	1.65	1.20
Refrigeration Pipe Tail – Liquid	3/8"	3/8"	3/8"
Refrigeration Pipe Tail – Suction	1/2"	1/2"	1/2"

### Electrical Data (@ 230V 50Hz)

	Watts	Amps	Watts	Amps	Watts	Amps
Defrost Heaters	4000	17.39	2800	12.17	2000	8.69
Fans	171	0.7	126	0.5	98	0.4
Trim Heaters	244	1.0	163	0.7	117	0.5
Frame Heaters	543	2.36	330	1.43	281	1.22
Solenoid Valve / Controller	20	0.04	20	0.04	20	0.04
Lights Phillips LED's Frame and Under Belly	138	0.6	92	0.4	71	0.31
Maximum Load – Electric Defrost	5076	22.06	3521	15.3	2577	11.2

### Electrical Data (@400V 3ph 50Hz)

	L1	L2	L3	L1	L2	L3	L1	L2	L3
Maximum Load – Electric Defrost	4.7	9	9	3.1	6	6	2.4	4.4	4.4

### Miscellaneous Data

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

### Set-Up Data\*\*

	Electric Defrost
Cut in Temperature [°C]	-23
Cut out Temperature [°C]	-24
N° Defrosts (per 24hrs)	2
Maximum Defrost Time [mins]	60
Defrost Termination Temp (Def. Probe [°C])	10
Drain Down Time [mins]	5
Fans in Defrost	Off (Top off Bottom Slow)
Cabinet Temperature Ratio (%)	50
Danfoss Display Temperature Correction (r04 K)	3 (Optional)
Superheat [K]	5
RDM Valve Response On	1
RDM Valve Response Off	15
Trim Heater Control (%)	100
Fan Start Delay after Defrost	10 Mins
Fan Start Temperature after defrost	-30°C

NOTES!

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

## Cabinet Technical Data Sheet – GCA Water Cooled GEN 1

Product Type	Frozen Food
Product Temperature	-18°C / -22°C
Maximum Design Ambient	ISO 3 25°C 60%RH
Store Design Ambient	ISO 0 20°C 50%RH

<b>Case Length [m]</b>	<b>3.75</b>	<b>2.50</b>	<b>1.87</b>
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### Refrigeration Data

Nett Environmental Cooling Effect	+0.84	+1.06	0.42
Refrigerant Charge per System R1270	700g	420g	700g

<b>Electrical Data (@ 230V 50Hz)</b>	<b>Watts</b>	<b>Amps</b>	<b>Watts</b>	<b>Amps</b>	<b>Watts</b>	<b>Amps</b>
Defrost Heaters	4000	17.39	2800	12.17	2000	8.69
Fans	171	0.7	126	0.5	98	0.4
Trim Heaters	244	1.0	163	0.7	117	0.5
Frame Heaters	543	2.36	330	1.43	281	1.22
Solenoid Valve / Controller	10	0.04	10	0.04	10	0.04
Lights Phillips LED's Frame and Under Belly	138	0.6	92	0.4	71	0.31
Condensing unit	2358	10.3	1678	7.3	1179	5.1
Maximum Load – Electric Defrost	5076	22.06	3521	15.3	2577	11.2

<b>Electrical Data (@400V 3ph 50Hz)</b>	<b>L1</b>	<b>L2</b>	<b>L3</b>	<b>L1</b>	<b>L2</b>	<b>L3</b>	<b>L1</b>	<b>L2</b>	<b>L3</b>
Maximum Load – Normal Run	4.7	5.1	5.1	3.2	3.7	3.7	2.6	5.1	0
Maximum Load – Electric Defrost	4.7	9	9	3.1	6	6	2.4	4.4	4.4

### Miscellaneous Data

Total Heat Rejection THR [KW]	6.40	4.80	3.2
THR (Air only) [KW]	1.5	1.5	0.75
THR (Water only) [KW]	4.9	3.296	2.45
Glycol Flow Rate [Kg/S]***	0.2126	0.1428	0.1063
Water Flow Rate [Kg/S]****	0.1956	0.1313	0.0978
Water inlet temperature		18°C	
Water outlet temperature		24°C	
Plate Heat Exchanger [Kpa] each		2 @ 0.86 Kpa	1 @0.86Kpa

Drain Outlet	32mm Plastic
Electrical Connections	Underside of Cabinet LHS
Chilled Water Connections	22mm

### Set-Up Data\*\*

	<b>Electric Defrost</b>	<b>Ice-Cream &amp; WAE</b>
Cut in Temperature [°C]	-23	-25
Cut out Temperature [°C]	-25	-27
Anti Cycle time [seconds]	180	180
Compressor Delay [seconds]	60	60 (1875mm + WAE 0)
N° Defrosts (per 24hrs)	2	2
Maximum Defrost Time [mins]	60	60
Defrost Termination Temp (Def. Probe [°C])	10	10
Drain Down Time [mins]	5	5
Fans in Defrost	Off (Top off Bottom Slow)	Off (Top off Bottom slow)
Cabinet Temperature Ratio (%)	50	50
Trim Heater Control (%)	100	100
Fan Start Delay after Defrost	10 Mins	10Mins
Fan Start Temperature after defrost	-30°C	-30°C

NOTES!

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

## Cabinet Technical Data Sheet – GCA Water Cooled GEN 3

Product Type	Frozen Food
Product Temperature	-18°C / -22°C
Maximum Design Ambient	ISO 3 25°C 60%RH
Store Design Ambient	ISO 0 20°C 50%RH

<b>Case Length [m]</b>	<b>2.50</b>	<b>1.87</b>	<b>2.1</b>
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### Refrigeration Data

Nett Environmental Cooling Effect	+1.06	+0.01	0.42
Refrigerant Charge per System R1270	500g	420g	470g

### Electrical Data (@ 230V 50Hz)

	Watts	Amps	Watt	Amps	Watts	Amps
Defrost Heaters	2800	12.17	2000	8.69	2400	10.4
Fans	126	0.5	98	0.4	102	0.4
Trim Heaters	163	0.7	117	0.5	137	0.6
Frame Heaters	330	1.43	281	1.22	462	2.0
Solenoid Valve / Controller	10	0.04	10	0.04	10	0.04
Lights Phillips LED's Frame and Under Belly	92	0.4	71	0.31	78	0.3
Condensing unit	3846	16.7	2550	5.1	2691	11.7
Maximum Load – Electric Defrost	3521	15.3	3113	11.2	3480	15.1

### Electrical Data (@400V 3ph 50Hz)

	L1	L2	L3	L1	L2	L3	L1	L2	L3
Maximum Load – Normal Run	3.2	8.4	8.4	2.5	5.5	5.5	3.3	7.6	7.6
Maximum Load – Electric Defrost	3.1	6.1	6.1	2.5	4.4	4.4	3.3	5.2	5.2

### Miscellaneous Data

Total Heat Rejection THR [KW]	5.58	3.85	4.36
THR (Air only) [KW]	0.33	0.33	0.33
THR (Water only) [KW]	5.25	3.52	4.03
Glycol Flow Rate [Kg/S]***	0.260	0.174	0.200
Plate Heat Exchanger [Kpa] each	10 Kpa	10kPa	10 Kpa

### Glycol Flow Rates; Inlet 41 °C Outlet 46°C

Glycol Flow Rate [Kg/S]***	0.2028	0.1741	0.200
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### Glycol Flow Rates; Inlet 40 °C Outlet 46°C

Glycol Flow Rate [Kg/S]***	0.2165	0.1451	0.1662
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Drain Outlet	32mm Plastic
Electrical Connections	Underside of Cabinet LHS
Chilled Water Connections	22mm

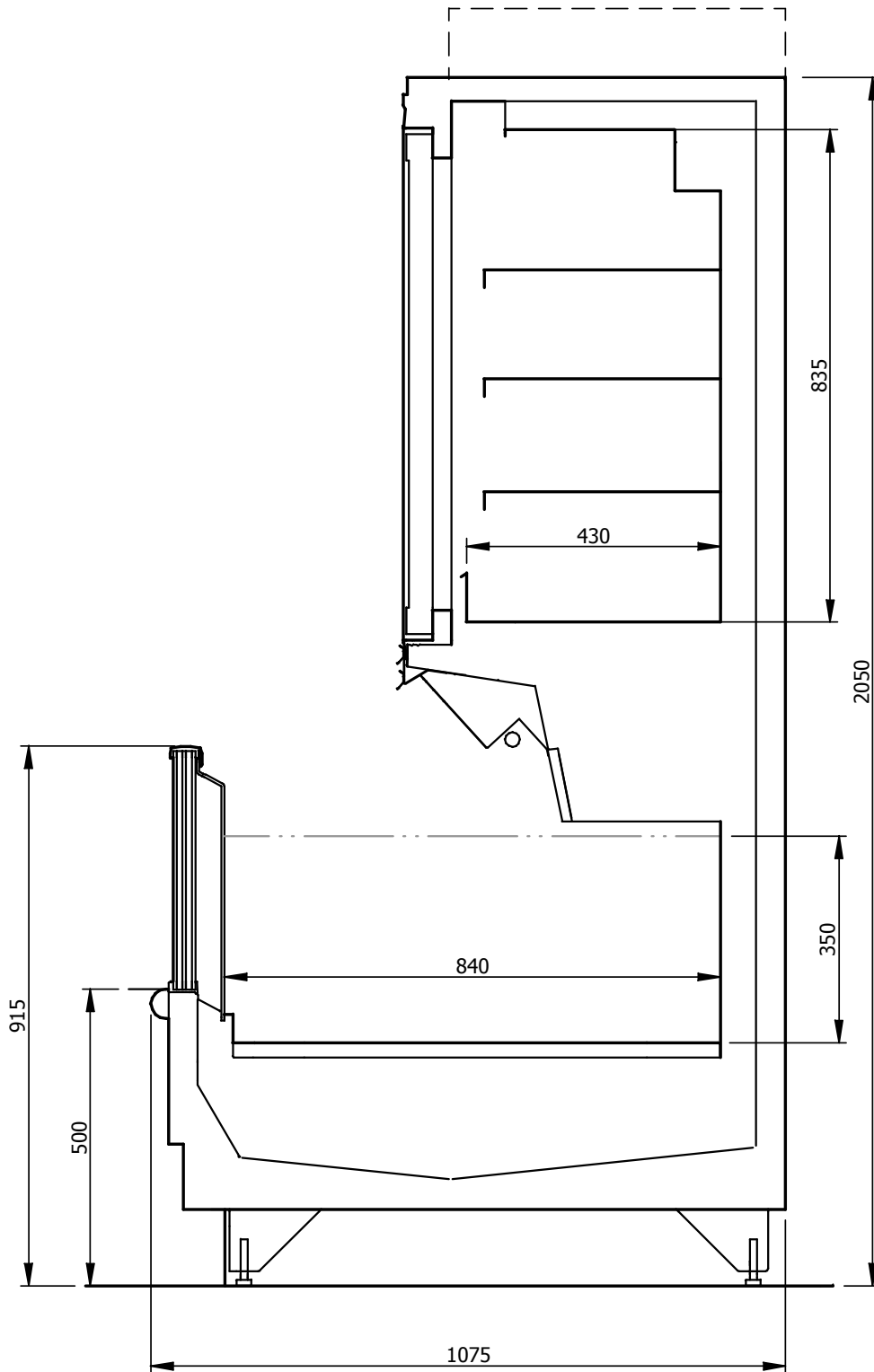
### Set-Up Data\*\*

	Electric Defrost	Ice cream & WAE
Cut in Temperature [°C]	-23	-27
Cut out Temperature [°C]	-25	-29
Anti Cycle time [seconds]	180	180
Compressor Delay [seconds]	60	60 (WAE 0)
N° Defrosts (per 24hrs)	2	2
Maximum Defrost Time [mins]	60	60
Defrost Termination Temp (Def. Probe [°C])	10	10
Drain Down Time [mins]	5	5
Fans in Defrost	Off (Top off Bottom Slow)	Off (Top off Bottom Slow)
Cabinet Temperature Ratio (%)	50	50
Trim Heater Control (%)	100	100
Fan Start Delay after Defrost	10min	10min
Fan Start Temperature after defrost	-30°C	-30°C

NOTES!

\*\* Set-up data is for guidance only. Final settings to be determined by commissioning contractor.  
 \*\*\* Specific heat of 15% Glycol @ 40°C = 4.0425 KJ/Kg

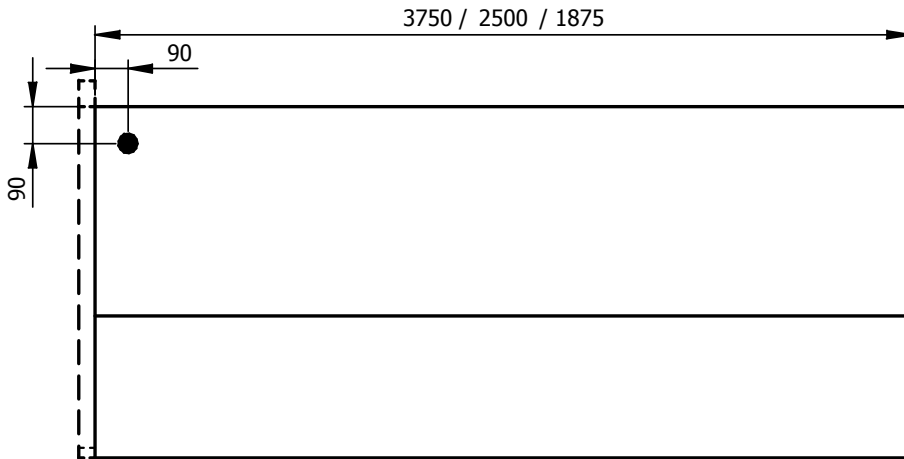
**Section Drawing – GCA**



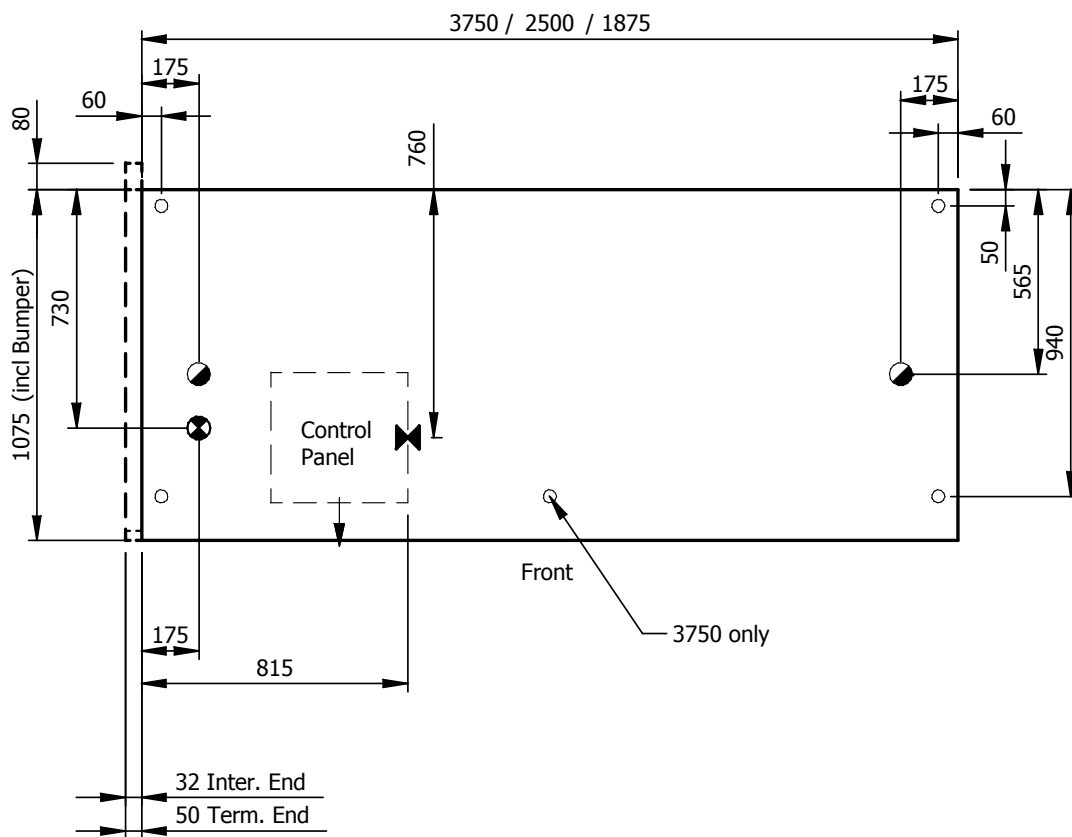
Ref:- DS1234-01

## Plan Drawing – GCA

- KEY
- Feet Positions
  - Refrig. Outlets
  - ◐ Drain Outlets
  - ⊗ Elect. Outlets
  - ⌘ Mains Supply



Plan of Top



Plan of Base

Ref:- DP1159-01



**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
GCA7S00177	02.10.15		✓			
GCA7S00164	05.10.15			✓		
GCA6W00154	05.10.15	✓				
GCA7S00132	05.10.15	✓				
GCA7S00153	05.10.15	✓				
GCA6S00131	05.10.15	✓				
GCA6S00117	05.10.15	✓				
GCA4S00152	05.10.15	✓				
GCA6S00684						✓

## Cabinet Code Template

Example of CRE case code letter designation:-

**GCA7S00177**

G – Model Identification  
C – Model Identification  
A – Design Revision  
7 – Length  
S – Run Position  
0 – Unique Identifier  
0 – Unique Identifier  
1 – Unique Identifier  
7 – Unique Identifier  
7 – 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