

# G5 MEDIUM PROFILE UNIT COOLER



## CAPACITY

SERIES	APPLICATION	CAPACITY
ESN	Medium Temperature	3.55kW – 46.56kW
ESN....P	Medium Temperature with Partial Defrost	2.97kW – 28.94kW
ESL	Low Temperature	2.00kW – 22.42kW

Effective Air Throw : 19.1m – 21.9m

# G5

## MEDIUM PROFILE SERIES UNIT COOLER

ESN / ESN....P / ESL

### General Features

**Eden G5 Medium Profile Series** are designed with our latest in-house Smart Circuitry Program; allowing maximum mass flow rate of refrigerant to be evenly distributed throughout the evaporator. This improves coil efficiency thus providing higher cooling capacities from a smaller compact coil design.

Eden G5 Medium Profile Series incorporates a modular design ensuring a more balanced and consistent airflow throughout each fan bay section for better coil performance and efficiency. Centre plates incorporated between each fan bay to enhance air side performance and structural strength for models with 2 or more fans.

Eden coils use copper Inner Groove Tubes (IGT) that increases the internal coil surfaces whilst having a low oil film coefficient thus providing higher efficiencies and capacities. These copper tubes are in accordance with JIS-C1220T.

Fins are produced from high grade Aluminium (Aluminium Association - AA1100 Standard) with Double Sine Wave Pattern and Rippled Fin Edges for maximum fin surface and higher heat transfer efficiency.

Fan Motors used in all models are high quality German fan motors, fitted with thermistor motor protection and conform to DIN 40050 safety standards. Fan motors are of the highest quality offered in the industry ensuring long life and durability for both high and low temperature applications.

Casing is made from high quality powder coated Aluminium, according to AA1100 Standards.

Compact design reduces dimensional volume to enhance cold room productivity without losing cooling capacity and is also easier to handle during installations.

Defrosting is by electrical sheathed stainless-steel heating elements with vulcanized rubber connections to ensure effective defrosting and durability. Water resulting from defrosting is channelled to the drain pan with a centrally positioned outlet for positive draining from all points.

Electrical junction box(es) are 3mm thick ABS, IP56 protection rating with flame class V-0 and are mounted internally. Side panels on both ends are hinged allow for easy access to junction box(es) and service of components.

Eden G5 Medium Profile Series can also be applied with most new generation refrigerants (except CO<sub>2</sub> & NH<sub>3</sub>). All Capacity Ratings in this document are thermally guaranteed by Eden and tested in accordance to ASHRAE dry box standards.

Eden G5 Medium Profile Series comes with Quality Assurance as they are designed, manufactured and tested at our factory with ISO9001 certification. It also comes with a One(1) Year Warranty against quality & manufacturing defects (Terms and conditions apply).

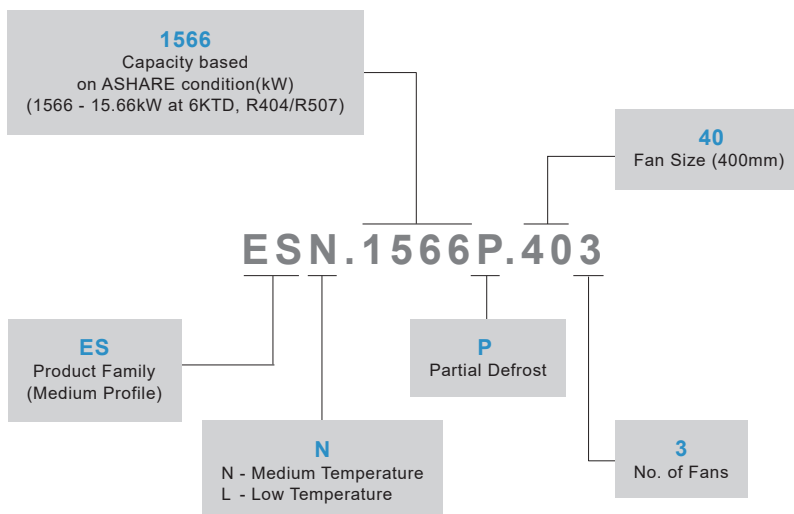




**Options**

- a** Copper-Fins coil
- b** Epoxy-Coated Aluminum Fin Coil (Only for large volume order)
- c** Passivated Corrosion Protection for All Aluminum Fin Products
- d** Hot gas Bypass
- e** Stainless Steel Casing
- f** Special Circuitry for Ultra Low Temperature or Overfeed Systems
- g** Chilled water Coils, Brine Coils or Liquid Overfeed Coils

**Nomenclature**



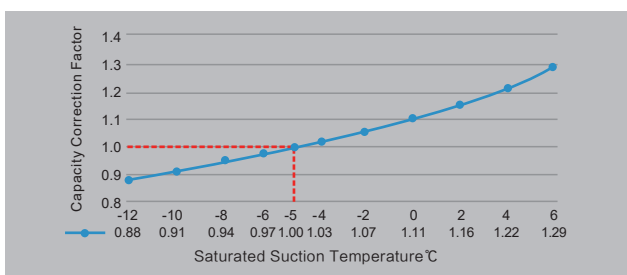
# Technical Data

## ESN - Medium Temperature Unit Cooler

Air Defrost 6FPI (4.23mm) Room Temperature +3°C

Model	CAPACITY		FAN DATA							
	R404A / R507		No. of Fans 400mm	Fan Motor			Fan Speed (rpm)	Air Flow		Air Throw** (m)
	ASHRAE (ET=-5°C,RT=3°C)	EUROVENT* SC2 (ET=-8°C,RT=0°C)		(V/Ph/Hz)	(Watts)	(Amps)		(l/s)	(m³/hr)	
	Watts (8KTD)	Watts (8KTD)		(V/Ph/Hz)	(Watts)	(Amps)	(l/s)	(m³/hr)		
ESN 0355.401	3,550	3,840	1	400/3/50	135	0.44	1,450	855	3,078	20.0
ESN 0521.401	5,210	5,630	1	400/3/50	135	0.44	1,450	845	3,041	19.8
ESN 0660.401	6,600	7,130	1	400/3/50	135	0.44	1,450	835	3,005	19.6
ESN 0773.401	7,730	8,360	1	400/3/50	135	0.44	1,450	825	2,968	19.4
ESN 0864.401	8,640	9,340	1	400/3/50	135	0.44	1,450	815	2,932	19.1
ESN 1015.402	10,150	10,970	2	400/3/50	270	0.88	1,450	1,700	6,118	20.3
ESN 1280.402	12,800	13,840	2	400/3/50	270	0.88	1,450	1,679	6,045	20.1
ESN 1500.402	15,000	16,220	2	400/3/50	270	0.88	1,450	1,659	5,972	19.8
ESN 1756.402	17,560	18,980	2	400/3/50	270	0.88	1,450	1,639	5,901	19.6
ESN 1983.403	19,830	21,440	3	400/3/50	405	1.32	1,450	2,554	9,196	20.8
ESN 2398.403	23,980	25,920	3	400/3/50	405	1.32	1,450	2,524	9,086	20.6
ESN 2750.403	27,500	29,730	3	400/3/50	405	1.32	1,450	2,493	8,976	20.3
ESN 2936.404	29,360	31,740	4	400/3/50	540	1.76	1,450	3,399	12,236	21.3
ESN 3380.404	33,800	36,540	4	400/3/50	540	1.76	1,450	3,358	12,089	21.1
ESN 3780.404	37,800	40,860	4	400/3/50	540	1.76	1,450	3,318	11,945	20.9
ESN 4268.405	42,680	46,140	5	400/3/50	675	2.20	1,450	4,275	15,388	21.9
ESN 4656.405	46,560	50,330	5	400/3/50	675	2.20	1,450	4,223	15,204	21.7

### Application & Correction Factor Guideline



ESN Correction Chart

Refrigerant	Capacity Multiplier
R22	1.011
R407B	0.961
R407C	0.940
R134A	0.986
<b>R404A / R507</b>	<b>1</b>
R407F	1.011
R448A	1.030
R449A	0.930

Relative Humidity %	Temperature Difference (KTD)
60	16
65	14
70	12
75	10
80	8
85	6
90	4
100	2

RH vs KTD Selection Table

Products	Storage Temperature (°C)	Recommended RH%
Avocados	7 to 13	85 - 90%
Banana, Green	13 to 14	90 - 95%
Beans, dry	4 to 10	40 - 50%
Cucumbers	10 to 13	95%
Guava	5 to 10	90%
Oranges	4	90 - 95%
Butter	4	75 - 85%
Yams	16	70 - 80%

Suggested Product Storage Temperature & RH% (USDA, 1987)

### Capacity Ratings & Conditions

All Eden Heat Exchangers are tested in Accordance to ASHRAE Dry Box Standard (Recommended for Asia Usage)

ASHRAE Condition - Air Inlet Temperature = +3°C and Evaporating Temperature = -5°C

\* EUROVENT Data is used for Comparison Purposes

\* EUROVENT Data is based on SC2 Nominal Capacity

SC2 Condition - Air Inlet Temperature = +0°C and Evaporating Temperature = -8°C

\*\* Air Throw indicated is the distance from the unit to the furthest point where an air velocity of 0.5m/s can still be measured

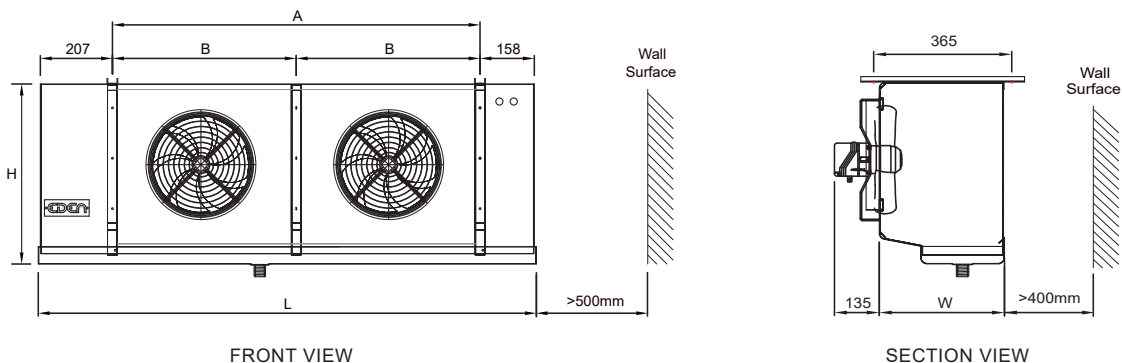
# Technical Data

## ESN - Medium Temperature Unit Cooler

Air Defrost 6FPI (4.23mm) Room Temperature +3°C

Model	CONNECTION DETAILS			DIMENSIONAL DETAILS									Weight (Kg)*
	Connection (mm)			A	B	H	W	L	H*	W*	L*		
	Liquid	Suction	Drain Pipe										
ESN 0355.401	12.7	22.2	25.4	588	-	639	330	957	820	620	1,100	34	
ESN 0521.401	12.7	22.2	25.4	588	-	639	330	957	820	620	1,100	37	
ESN 0660.401	12.7	28.6	25.4	588	-	639	330	957	820	620	1,100	39	
ESN 0773.401	12.7	28.6	25.4	588	-	639	330	957	820	620	1,100	41	
ESN 0864.401	12.7	28.6	25.4	588	-	639	330	957	820	620	1,100	43	
ESN 1015.402	12.7	28.6	25.4	1,148	574	639	330	1,517	820	620	1,660	60	
ESN 1280.402	12.7	28.6	25.4	1,148	574	639	330	1,517	820	620	1,660	64	
ESN 1500.402	15.8	28.6	25.4	1,148	574	639	330	1,517	820	620	1,660	69	
ESN 1756.402	15.8	28.6	25.4	1,148	574	639	330	1,517	820	620	1,660	73	
ESN 1983.403	15.8	28.6	25.4	1,707	569	639	330	2,077	820	620	2,220	93	
ESN 2398.403	19.0	34.9	25.4	1,707	569	639	330	2,077	820	620	2,220	99	
ESN 2750.403	19.0	34.9	25.4	1,707	569	639	330	2,077	820	620	2,220	105	
ESN 2936.404	19.0	34.9	25.4	2,268	567	639	330	2,637	820	620	2,790	135	
ESN 3380.404	22.2	34.9	25.4	2,268	567	639	330	2,637	820	620	2,790	146	
ESN 3780.404	22.2	34.9	25.4	2,268	567	639	330	2,637	820	620	2,790	158	
ESN 4268.405	22.2	41.3	25.4	2,830	566	639	330	3,198	820	620	3,350	179	
ESN 4656.405	22.2	41.3	25.4	2,830	566	639	330	3,198	820	620	3,350	193	

\*Packed Dimensions / Weight



## Additional Information

### Example

Application : Yams Storage Room  
 Required Room Temperature : +16°C  
 Ambient : +35°C  
 Required KTD : 12 KTD (or 70% RH)  
 Required Cooling Capacity (Inclusive of the fan and heater load) : 10kW (ASHRAE)  
 Type of Refrigerant : R449A

### Selection of the Eden G5 ESN Unit Cooler as follows

- Determine the Correction Factors and Multiplier (Refer to page 3)
  - Since 12 KTD is required; thus the ET is found to be:  
 $ET = RT - KTD = 16^{\circ}C - 12KTD = 4^{\circ}C$
  - Capacity Correction Factor is Approximately 1.22 (ET -5°C → 4°C, refer to Correction Chart)
  - Refrigerant multiplier = 0.930 (R404A → R449A, refer to Table)
- Calculation of required capacity at ET = 4°C (@12KTD)  
 $10kW \div 1.22 \div 0.930 = 8.8kW$  (Inclusive of the fan and heater load)
- Calculate the unit cooler capacity needed at 8KTD  
 $8.8kW \div 12 \times 8 = 5.9kW$
- Hence ESN 0660.401 is the selected unit cooler for the above application.
- To check if selected model ESN 0660.401 will achieve at least 10kW for the above application:  
 $Capacity = 6.6kW \times 1.22 \times 0.930 \div 8 \times 12 = 11.2kW$  (For R449A, 12KTD, ET = 4°C)  
 Hence, ESN 0660.401 with cooling capacity of 11.2kW is adequate for this application.



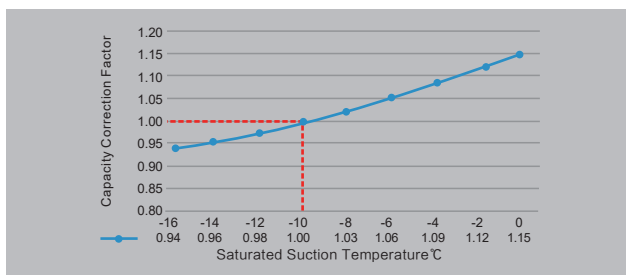
# Technical Data

## ESN...P - Partial Defrost Unit Cooler

Electric Defrost 6FPI (4.23mm) Room Temperature -4°C

Model	CAPACITY		FAN DATA							
	R404A / R507		No. of Fans 400mm	Fan Motor			Fan Speed (rpm)	Air Flow		Air Throw** (m)
	ASHRAE (ET=-10°C,RT=-4°C)	EUROVENT* SC2 (ET=-8°C,RT=0°C)		(V/Ph/Hz)	(Watts)	(Amps)		(l/s)	(m³/hr)	
	Watts (6KTD)	Watts (8KTD)		(V/Ph/Hz)	(Watts)	(Amps)	(l/s)	(m³/hr)		
ESN 0297P.401	2,970	4,690	1	400/3/50	135	0.44	1,450	845	3,041	19.8
ESN 0379P.401	3,790	5,990	1	400/3/50	135	0.44	1,450	835	3,005	19.6
ESN 0448P.401	4,880	7,710	1	400/3/50	135	0.44	1,450	825	2,968	19.4
ESN 0506P.401	5,060	7,990	1	400/3/50	135	0.44	1,450	815	2,932	19.1
ESN 0582P.402	5,820	9,190	2	400/3/50	270	0.88	1,450	1,700	6,118	20.3
ESN 0741P.402	7,410	11,700	2	400/3/50	270	0.88	1,450	1,679	6,045	20.1
ESN 0873P.402	8,730	13,790	2	400/3/50	270	0.88	1,450	1,659	5,972	19.8
ESN 1028P.402	10,280	16,240	2	400/3/50	270	0.88	1,450	1,639	5,901	19.6
ESN 1159P.403	11,590	18,300	3	400/3/50	405	1.32	1,450	2,554	9,196	20.8
ESN 1403P.403	14,030	22,160	3	400/3/50	405	1.32	1,450	2,524	9,086	20.6
ESN 1566P.403	15,660	24,730	3	400/3/50	405	1.32	1,450	2,493	8,976	20.3
ESN 1728P.404	17,280	27,290	4	400/3/50	540	1.76	1,450	3,502	12,607	21.3
ESN 2024P.404	20,240	31,970	4	400/3/50	540	1.76	1,450	3,460	12,456	21.1
ESN 2260P.404	22,600	35,690	4	400/3/50	540	1.76	1,450	3,418	12,306	20.9
ESN 2534P.405	25,340	40,020	5	400/3/50	675	2.20	1,450	4,378	15,759	21.9
ESN 2894P.405	28,940	45,710	5	400/3/50	675	2.20	1,450	4,325	15,569	21.7

### Application & Correction Factor Guideline



ESN...P Correction Chart

Refrigerant	Capacity Multiplier
R22	1.011
R407B	0.961
R407C	0.940
R134A	0.986
<b>R404A / R507</b>	<b>1</b>
R407F	1.011
R448A	1.030
R449A	0.930

Relative Humidity %	Temperature Difference (KTD)
60	16
65	14
70	12
75	10
80	8
85	6
90	4
100	2

RH vs KTD Selection Table

Products	Storage Temperature (°C)	Recommended RH%
Beef, Fresh	-2 to 0	88 - 95%
Bean sprouts	0	95 - 100%
Cherries, sweet	-1 to 0.5	90 - 95%
Coconuts	0 to 1.5	80 - 85%
Fish, Fresh	1 to 2	90 - 96%
Pears	-1.5 to 0.5	90 - 95%
Peppers, Chill (dry)	0 to 10	60 - 70%
Pork, Fresh	0 to 2	95%

Suggested Product Storage Temperature & RH% (USDA, 1987)

### Capacity Ratings & Conditions

All Eden Heat Exchangers are tested in Accordance to ASHRAE Dry Box Standard (Recommended for Asia Usage)

ASHRAE Condition - Air Inlet Temperature = -4°C and Evaporating Temperature = -10°C

\* EUROVENT Data is used for Comparison Purposes

\* EUROVENT Data is based on SC2 Nominal Capacity

SC2 Condition - Air Inlet Temperature = +0°C and Evaporating Temperature = -8°C

\*\* Air Throw indicated is the distance from the unit to the furthest point where an air velocity of 0.5m/s can still be measured

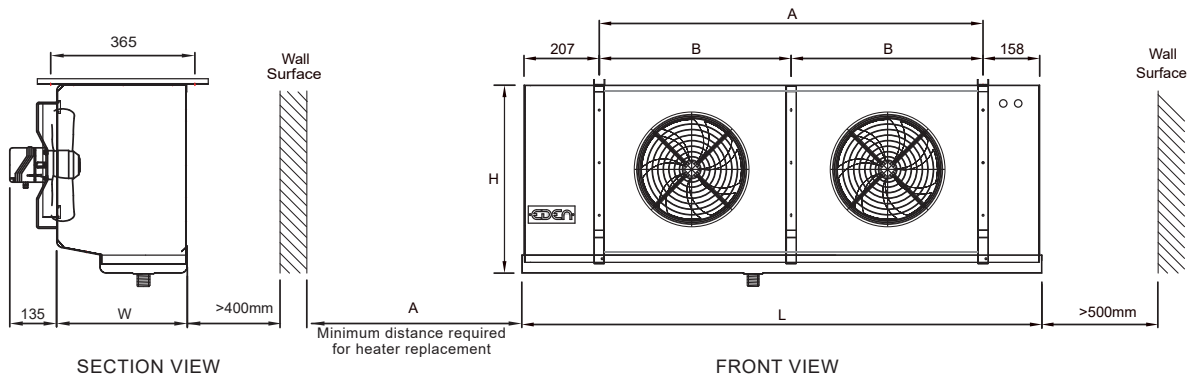
# Technical Data

## ESN...P - Partial Defrost Unit Cooler

Electric Defrost 6FPI (4.23mm) Room Temperature -4°C

Model	CONNECTION DETAILS			HEATER DETAILS		DIMENSIONAL DETAILS								Weight (Kg)*
	Connection (mm)			Coil Heater (Watts)	Drain Pan Heater (Watts)	A	B	H	W	L	H*	W*	L*	
	Liquid	Suction	Drain Pipe											
ESN 0297P.401	12.7	22.2	25.4	2 x 600	1 x 450	588	-	639	330	957	820	620	1,100	37
ESN 0379P.401	12.7	22.2	25.4	2 x 600	1 x 450	588	-	639	330	957	820	620	1,100	39
ESN 0448P.401	12.7	22.2	25.4	2 x 600	1 x 450	588	-	639	330	957	820	620	1,100	41
ESN 0506P.401	12.7	22.2	25.4	2 x 600	1 x 450	588	-	639	330	957	820	620	1,100	43
ESN 0582P.402	12.7	22.2	25.4	2 x 1,150	1 x 700	1,148	574	639	330	1,517	820	620	1,660	60
ESN 0741P.402	12.7	28.6	25.4	2 x 1,150	1 x 700	1,148	574	639	330	1,517	820	620	1,660	64
ESN 0873P.402	15.8	28.6	25.4	2 x 1,150	1 x 700	1,148	574	639	330	1,517	820	620	1,660	69
ESN 1028P.402	15.8	28.6	25.4	2 x 1,150	1 x 700	1,148	574	639	330	1,517	820	620	1,660	73
ESN 1159P.403	15.8	28.6	25.4	2 x 1,700	1 x 1,070	1,707	569	639	330	2,077	820	620	2,220	93
ESN 1403P.403	19.0	28.6	25.4	2 x 1,700	1 x 1,070	1,707	569	639	330	2,077	820	620	2,220	99
ESN 1566P.403	19.0	28.6	25.4	2 x 1,700	1 x 1,070	1,707	569	639	330	2,077	820	620	2,220	105
ESN 1728P.404	19.0	28.6	25.4	2 x 2,300	1 x 1,400	2,268	567	639	330	2,637	820	620	2,790	135
ESN 2024P.404	22.2	34.9	25.4	2 x 2,300	1 x 1,400	2,268	567	639	330	2,637	820	620	2,790	146
ESN 2260P.404	22.2	34.9	25.4	2 x 2,300	1 x 1,400	2,268	567	639	330	2,637	820	620	2,790	158
ESN 2534P.405	22.2	34.9	25.4	2 x 2,950	1 x 1,770	2,830	566	639	330	3,198	820	620	3,350	179
ESN 2894P.405	22.2	34.9	25.4	2 x 2,950	1 x 1,770	2,830	566	639	330	3,198	820	620	3,350	193

\*Packed Dimensions / Weight



## Additional Information

### Example

Application : Pears Chiller Room  
 Required Room Temperature : 0°C  
 Relative Humidity : 90%  
 Required Cooling Capacity : 8.7kW (ASHRAE)  
 (Inclusive of the fan and heater load)  
 Type of Refrigerant : R134A

### Selection of the Eden G5 ESN...P Unit Cooler as follows

- Determine the Correction Factors and Multiplier (Refer to page 5)
  - Based on %RH vs KTD Chart on page 5, to achieve 90% RH, 4 KTD is required; thus the ET is found to be:  $ET = RT - KTD = 0°C - 4KTD = -4°C$
  - Capacity Correction Factor is Approximately 1.09 (ET -10°C → -4°C, refer to Correction Chart)
  - Refrigerant multiplier = 0.986 (R404A → R134A, refer to Table )
- Calculation of required capacity at ET = -4°C (@4KTD)  
 $8.7 \text{ kW} \div 1.09 \div 0.986 = 8.1 \text{ kW}$  (Inclusive of the fan and heater load)
- Calculate the unit cooler capacity needed at 6KTD  
 $8.1 \text{ kW} \div 4 \times 6 = 12.2 \text{ kW}$
- Hence a ESN 1403P.403 is the selected unit cooler for the above application.
- To check if selected model ESN 1403P.403 will achieve at least 8.7kW for the above application:  
 $\text{Capacity} = 14.03 \text{ kW} \times 1.09 \times 0.986 \div 6 \times 4 = 10.1 \text{ kW}$  (For R134A, 4KTD, ET = -4°C, RH= 90%)  
 Hence, ESN 1403P.403 with cooling capacity of 10.1kW is adequate for this application.

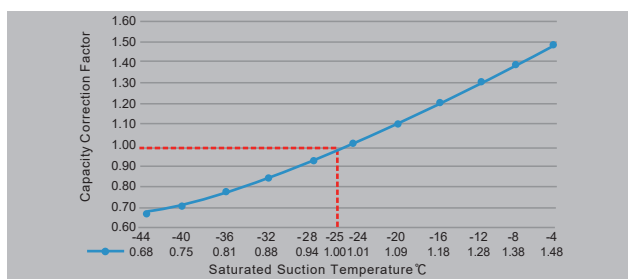
# Technical Data

## ESL - Low Temperature Unit Cooler

Electric Defrost 4FPI (6.35mm) Room Temperature -19°C

Model	CAPACITY		FAN DATA							
	R404A / R507		No. of Fans 400mm	Fan Motor			Fan Speed (rpm)	Air Flow		Air Throw** (m)
	ASHRAE (ET=-25°C,RT=-19°C)	EUROVENT* SC3 (ET=-25°C,RT=-18°C)		(V/Ph/Hz)	(Watts)	(Amps)		(l/s)	(m³/hr)	
	Watts (6KTD)	Watts (7KTD)		(V/Ph/Hz)	(Watts)	(Amps)	(rpm)	(l/s)	(m³/hr)	
ESL 0200.401	2,000	2,450	1	400/3/50	135	0.44	1,450	876	3,152	19.8
ESL 0248.401	2,480	3,040	1	400/3/50	135	0.44	1,450	865	3,114	19.6
ESL 0290.401	2,900	3,550	1	400/3/50	135	0.44	1,450	855	3,077	19.4
ESL 0330.401	3,300	4,040	1	400/3/50	135	0.44	1,450	844	3,040	19.1
ESL 0382.402	3,820	4,680	2	400/3/50	270	0.88	1,450	1,751	6,304	20.3
ESL 0487.402	4,870	5,970	2	400/3/50	270	0.88	1,450	1,730	6,228	20.1
ESL 0616.402	6,160	7,550	2	400/3/50	270	0.88	1,450	1,709	6,153	19.8
ESL 0753.402	7,530	9,220	2	400/3/50	270	0.88	1,450	1,689	6,079	19.6
ESL 0868.403	8,680	10,630	3	400/3/50	405	1.32	1,450	2,627	9,455	20.8
ESL 1040.403	10,400	12,740	3	400/3/50	405	1.32	1,450	2,595	9,342	20.6
ESL 1203.403	12,030	14,740	3	400/3/50	405	1.32	1,450	2,564	9,230	20.3
ESL 1335.404	13,350	16,350	4	400/3/50	540	1.76	1,450	3,502	12,607	21.3
ESL 1534.404	15,340	18,790	4	400/3/50	540	1.76	1,450	3,460	12,456	21.1
ESL 1673.404	16,730	20,490	4	400/3/50	540	1.76	1,450	3,418	12,306	20.9
ESL 2003.405	20,030	24,540	5	400/3/50	675	2.20	1,450	4,378	15,759	21.9
ESL 2242.405	22,420	27,460	5	400/3/50	675	2.20	1,450	4,325	15,569	21.7

### Application & Correction Factor Guideline



ESL Correction Chart

Refrigerant	Capacity Multiplier
R22	1.011
R407B	0.961
R407C	0.940
R134A	0.986
<b>R404A / R507</b>	<b>1</b>
R407F	1.011
R448A	1.030
R449A	0.930

Relative Humidity %	Temperature Difference (KTD)
60	16
65	14
70	12
75	10
80	8
85	6
90	4
100	2

RH vs KTD Selection Table

Products	Storage Temperature (°C)	Recommended RH%
Beef, Frozen	-18	90 - 95%
Fish, Frozen	-20	90 - 95%
Lamb, Frozen	-18	90 - 95%
Pork, Frozen	-18	90 - 95%
Poultry, Frozen	-18	90 - 95%
Dates, Frozen	-18 to -7	75%
Ice cream	-25	85%
Dumplings, Frozen	-18	90%

Suggested Product Storage Temperature & RH% (FAO, 2004)

### Capacity Ratings & Conditions

All Eden Heat Exchangers are tested in accordance to ASHRAE Dry Box Standard (Recommended for Asia Usage)

ASHRAE Condition - Air Inlet Temperature = -19°C and Evaporating Temperature = -25°C

\* **EUROVENT Data is used for Comparison Purposes**

\* Eurovent Data is based on **SC3 Nominal Capacity**

SC3 Condition - Air Inlet Temperature = -18°C and Evaporating Temperature = -25°C

\*\* Air Throw indicated is the distance from the unit to the furthest point where an air velocity of 0.5m/s can still be measured



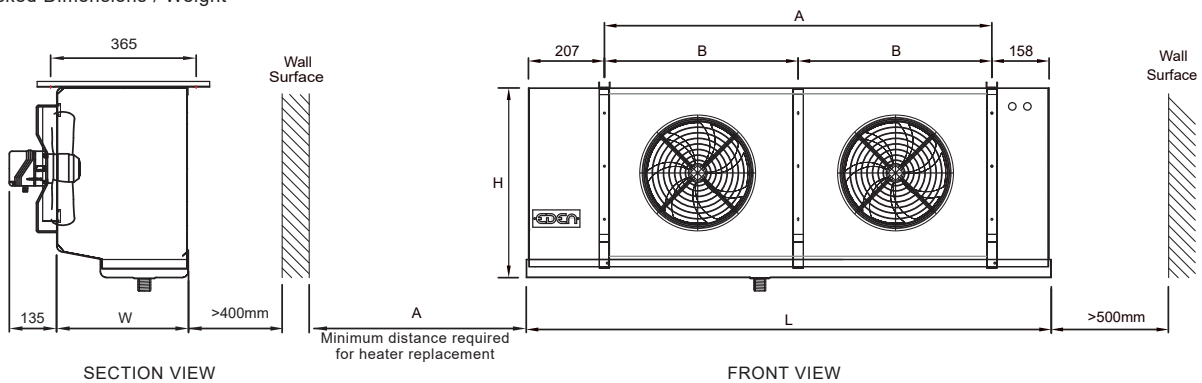
# Technical Data

## ESL - Low Temperature Unit Cooler

Electric Defrost 4FPI (6.35mm) Room Temperature -19°C

Model	CONNECTION DETAILS			HEATER DETAILS		DIMENSIONAL DETAILS							Weight (Kg)*	
	Connection(mm)			Coil Heater (Watts)	Drain Pan Heater (Watts)	A	B	H	W	L	H*	W*		L*
	Liquid	Suction	Drain Pipe											
ESL 0200.401	12.7	22.2	25.4	4 x 600	1 x 450	588	-	639	330	957	820	620	1,100	36
ESL 0248.401	12.7	22.2	25.4	4 x 600	1 x 450	588	-	639	330	957	820	620	1,100	39
ESL 0290.401	12.7	22.2	25.4	4 x 600	1 x 450	588	-	639	330	957	820	620	1,100	41
ESL 0330.401	12.7	22.2	25.4	4 x 600	1 x 450	588	-	639	330	957	820	620	1,100	43
ESL 0382.402	12.7	22.2	25.4	4 x 1,150	1 x 700	1,148	574	639	330	1,517	820	620	1,660	60
ESL 0487.402	12.7	28.6	25.4	4 x 1,150	1 x 700	1,148	574	639	330	1,517	820	620	1,660	64
ESL 0616.402	15.8	28.6	25.4	4 x 1,150	1 x 700	1,148	574	639	330	1,517	820	620	1,660	68
ESL 0753.402	15.8	28.6	25.4	4 x 1,150	1 x 700	1,148	574	639	330	1,517	820	620	1,660	72
ESL 0868.403	15.8	28.6	25.4	4 x 1,700	1 x 1,070	1,707	569	639	330	2,077	820	620	2,220	92
ESL 1040.403	19.0	28.6	25.4	4 x 1,700	1 x 1,070	1,707	569	639	330	2,077	820	620	2,220	98
ESL 1203.403	19.0	28.6	25.4	4 x 1,700	1 x 1,070	1,707	569	639	330	2,077	820	620	2,220	104
ESL 1335.404	19.0	28.6	25.4	4 x 2,300	1 x 1,400	2,268	567	639	330	2,637	820	620	2,790	134
ESL 1534.404	22.2	34.9	25.4	4 x 2,300	1 x 1,400	2,268	567	639	330	2,637	820	620	2,790	145
ESL 1673.404	22.2	34.9	25.4	4 x 2,300	1 x 1,400	2,268	567	639	330	2,637	820	620	2,790	156
ESL 2003.405	22.2	34.9	25.4	4 x 2,950	1 x 1,770	2,830	566	639	330	3,198	820	620	3,350	177
ESL 2242.405	22.2	34.9	25.4	4 x 2,950	1 x 1,770	2,830	566	639	330	3,198	820	620	3,350	191

\*Packed Dimensions / Weight



## Additional Information

### Example

Application : Ice Cream Freezer  
 Required Room Temperature : -25°C  
 Required KTD : 8 KTD (or 80% RH)  
 Required Cooling Capacity : 12kW (EUROVENT)  
 (Inclusive of the fan and heater load)  
 Type of Refrigerant : R404A

### Selection of the Eden G5 ESL Unit Cooler as follows

- Determine the Correction Factors and Multiplier (Refer to page 7)
  - Since 8 KTD is required; thus the ET is found to be:  
 $ET = RT - KTD = -25^\circ C - 8KTD = -33^\circ C$
  - Capacity Correction Factor is Approximately 0.86 (ET -25°C → -33°C, refer to Correction Chart)
  - Refrigerant multiplier = 1 (R404A → R404A, refer to Table )
- Calculation of required capacity at ET= -33°C (@8KTD)  
 $12 \text{ kW} \div 1 \div 0.86 = 14.0\text{kW}$  (Inclusive of the fan and heater load)
- Calculate the unit cooler capacity needed at 7KTD  
 $14.0\text{kW} \div 8 \times 7 = 12.3\text{kW}$
- Hence a ESL 1040.403 is the selected unit cooler for the above application.
- To check if selected model ESL 1040.403 will achieve at least 12kW for the above application:  
 Capacity:  $12.74\text{kW} \times 0.86 \times 1 \div 7 \times 8 = 12.5\text{kW}$  (For R404A, 8KTD, ET = -33°C)  
 Hence, ESL 1040.403 with cooling capacity of 12.5kW is adequate for this application.



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