COMMERCE ACT 1986: BUSINESS ACQUISITION

SECTION 66: NOTICE SEEKING CLEARANCE

3 August 2015

The Registrar Mergers and Authorisations Commerce Commission PO Box 2351 WELLINGTON

Pursuant to section 66(1) of the Commerce Act 1986, notice is hereby given seeking **clearance** of a proposed business acquisition.

EXECUTIVE SUMMARY

- B100 Limited ("Beijer"), a newly incorporated subsidiary of the Swedish refrigeration group Beijer Ref AB, seeks clearance to acquire the business and asset of Realcold Limited ("Realcold") ("Proposed Transaction").
- 2. Beijer Ref AB recently acquired Patton Limited, and as a result the parties overlap in the supply of certain refrigeration and air conditioning products and services, being:
 - (a) the importation and wholesale supply of refrigerants;
 - (b) the importation and wholesale supply of refrigeration components;
 - (c) the assembly and wholesale supply of refrigeration equipment;
 - (d) the importation and wholesale supply of high wall split air conditioning units; and
 - (e) the importation and wholesale supply of air conditioning components.
- 3. Beijer submits that the relevant markets for the purposes of this application are:
 - (a) the national market for the importation and wholesale supply of refrigerants in New Zealand:
 - (b) that national market for the importation and wholesale supply of refrigeration components in New Zealand;
 - (c) the national market for the assembly and wholesale supply of refrigeration equipment in New Zealand;
 - the national market for the importation and wholesale supply of high wall split air conditioning units in New Zealand; and
 - (e) the national market for the importation and wholesale supply of air conditioning components in New Zealand.
- 4. No substantial lessening of competition will arise as a consequence of the Proposed Transaction, because:
 - the combined entity would continue to face strong competition from the other market participants;
 - (b) barriers to entry and expansion are low;
 - (c) there is a real prospect of new entry and/or expansion by existing market participants;
 - (d) customers have countervailing power which would constrain the combined entity; and
 - (e) the combined entity is also constrained by customers bypassing wholesalers and acquiring products directly themselves.
- 5. Accordingly, as outlined further in this application, the Proposed Transaction is not likely to have the effect of substantially lessening competition in any market in New Zealand.

PART 1: APPLICANT AND OTHER PARTY DETAILS

Applicant for clearance

 This notice seeking clearance is given by B100 Limited ("Beijer"), a newly incorporated subsidiary of Beijer Ref AB.

Postal address: PO Box 12-508, Penrose, Auckland 1642

Physical address: 88 Carbine Road, Mount Wellington, Auckland 1060

Telephone: (09) 573 0060

Contact person: Sameer Handa

Director of B100 and CEO of Patton Limited

Relevant related entities: Patton Limited ("Patton")

Beijer Ref Holdings Limited

Beijer Ref AB (556040-8113) a public limited liability company, having its registered office at Stortorget 8, Se-211, 34 Malmo,

Sweden.

 All correspondence and notices in respect of this notice should be directed in the first instance to:

Sarah Simmers

Partner

Anderson Lloyd

sarah.simmers@andersonlloyd.co.nz

(03) 467 7184

8. A structure diagram for Beijer is set out in **Appendix A**. In this application we use "Beijer Group" to refer to Beijer Ref AB and its subsidiaries.

Other party to the acquisition

9. The other party is Realcold Limited ("Realcold")

Postal address: PO Box 12-072, Penrose, Auckland 1642

Physical address: 9 Prescott Street, Penrose, Auckland 1061

Telephone: (09) 526 5700

Website: <u>www.realcold.co.nz</u>

Contact person: Ralph Marshall

Director

Relevant related entities: Refrigeration Engineering Co Limited

Amalgamated Dairies Limited

10. All correspondence and notices for Realcold in respect of this notice should be directed in the first instance to:

David Lewis

Partner

Kensington Swan

david.lewis@kensingtonswan.com

(09) 914 7263

11. A structure diagram for Realcold is set out in **Appendix A**.

PART 2: TRANSACTION DETAILS

The Proposed Transaction

- 12. The Proposed Transaction would involve the acquisition by:
 - (a) Beijer of the New Zealand business and New Zealand assets of Realcold Limited; and
 - (b) Beijer Ref Realcold Pty Limited (ACN 607 086 948) of the Australian business and Australian assets of Realcold Pty Limited (ACN 089 846 873).

The Agreement for Sale and Purchase of Business and Assets is at Appendix B.

13. The Proposed Transaction is subject to, among other things, Beijer receiving clearance from the Commerce Commission ("Commission").

Commercial rationale

- 14. Beijer Ref AB is looking to acquire Realcold as part of its strategy to grow outside Europe. Beijer Ref AB, entered New Zealand with its recent acquisition of Patton Limited. This new acquisition would strengthen its operations in New Zealand and Australia.
- 15. Beijer Ref AB sees a significant need for efficient refrigeration plants in Australasia, with the large food exports and growing tourism industry of New Zealand and Australia.
- 16. Realcold's broad product portfolio (with brands such as Mitsubishi Heavy Industries, Tecumseh, Emerson Copeland and Gree) would be complemented with Beijer Ref AB's product programme. The acquisition would also contribute Beijer Ref AB's European refrigeration-technology expertise, and new eco-friendly refrigeration technology, in New Zealand and Australia.

Other competition agencies being notified of the Proposed Transaction

17. Ni

Overview of parties to the acquisition B100 Limited

18. The acquiring entity, B100 Limited, is a newly incorporated subsidiary of the Swedish refrigeration group, Beijer Ref AB. Beijer Ref AB is one of the largest refrigeration wholesalers in the world. It recently entered New Zealand with its acquisition of Patton Limited.

Patton Limited

- 19. Patton assembles and distributes commercial refrigeration and air conditioning equipment. It also designs and assembles unit coolers, condensers and condensing units, including bespoke compressor racks.
- 20. Patton was founded over 90 years ago in Christchurch. It has grown to now operate in 32 locations with assembly facilities in New Zealand, Australia and Thailand and has sales representation through the Pacific and Asia.
- 21. Copies of Patton's latest financial statement, sales revenues by customer, sales revenues by market, customers by market and spend by supplier may be found at **Appendices C and D**.

Realcold Limited

- 22. Realcold assembles and distributes commercial refrigeration and air conditioning equipment.
- Realcold was founded in 1955. It has its head office in Auckland, and branches in New Zealand and Australia. In New Zealand it has 10 branches, 68 employees and reported turnover of NZ\$22m in FY2014.
- 24. Realcold has had operations in Australia since 1999. Realcold has its distribution centre in Brisbane, eleven branches, 52 employees and turnover of \$24m in FY2014.

25. Copies of Realcold's annual reports, financial statements and sales revenues and volumes may be found at **Appendices E and F**.

Horizontal overlap between the parties

- 26. The parties overlap in the supply of certain refrigeration and air conditioning products and services, being:
 - (a) the importation and wholesale supply of refrigerants;
 - (b) the importation and wholesale supply of refrigeration components;
 - (c) the assembly and wholesale supply of refrigeration equipment;
 - (d) the importation and wholesale supply of high wall split air conditioning units; and
 - (e) the importation and wholesale supply of air conditioning components.
- 27. Information regarding the parties' competitors, key customers and suppliers is set out in **Appendices G, H and I.**

PART 3: COMPETITION ANALYSIS

COUNTERFACTUAL

28. Without the Proposed Transaction the Realcold business would continue to operate independently of the Beijer Group, as it does currently, [

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RELEVANT MARKETS

- 29. Beijer submits that the New Zealand refrigeration and air-conditioning businesses are appropriately segmented as follows:
 - the national market for the importation and wholesale supply of refrigerants in New Zealand;
 - (b) that national market for the importation and wholesale supply of refrigeration components in New Zealand;
 - (c) the national market for the assembly and wholesale supply of refrigeration equipment in New Zealand:
 - (d) the national market for the importation and wholesale supply of high wall split air conditioning units in New Zealand; and
 - the national market for the importation and wholesale supply of air conditioning components in New Zealand.
- 30. The following sections analyse each of the segments set out above.

Refrigerants and Refrigeration components Market definition

- 31. Refrigerants are a distinct type of refrigeration component which comprise the transportation medium between an evaporator and condenser. Refrigerant wholesalers such as Patton and Realcold import refrigerants into New Zealand and supply these to a range of industries.
- 32. The Commission considered refrigerants in Decision 735, the Refrigerant License Trust Board's authorisation decision dated 25 November 2011. In that Decision the Commission held that there was a national market for the importation and wholesale supply of refrigerants in New Zealand. Beijer considers that to be an appropriate market definition for the purposes of this Notice.
- 33. The Recovery Trust's website <u>www.refrigerantrecovery.co.nz has a list of most refrigerant</u> wholesalers in New Zealand:
 - (a) BOC Limited;
 - (b) Cooling Supplies;
 - (c) Heatcraft New Zealand Limited;
 - (d) Nuplex Specialties NZ Limited;
 - (e) Patton Limited;
 - (f) Refrigeration Engineering Co Limited (Realcold's holding company); and
 - (g) Refrigeration Specialties Limited.

34.		There are various other refrigeration components supplies by both Patton and Realcold. These components include:				
	(a)	compressors and compressor parts;				
	(b)	external rotor motors;				
	(c)	valves;				
	(d)	welding and brazing equipment;				
	(e)	tubing (including copper and PVC tubing);				
	(f)	evaporators;				
	(g)	refrigeration control systems;				
	(h)	variable speed drives;				
	(i)	equipment supplies and tools;				
	(j)	electric controls;				
	(k)	insulation; and				
	(I)	chemicals.				
35.	and cappea	e of these components are not unique to the refrigeration industry, such as copper, tubing controls. For those that are unique to the refrigeration industry, the competitive dynamics ar to be similar for each of the components, and Beijer suggests it would be appropriate opt a generic 'refrigeration components' market for the purposes of this Notice.				
36.	Analy Beijer basis	estimates shares for the importation and wholesale supply of refrigerants on a national				
	(a)	BOC:[]				
	(b)	Nuplex: []				
	(c)	Heatcraft: []				
	(d)	Realcold: []				
	(e)	Patton: []				
	As a []%.	result of the Proposed Transaction the Beijer Group would increase its market share to				
37.	suppl	he components that are not unique to the refrigeration industry, those components are ied by a range of suppliers outside of the refrigeration industry, and purchased by a e of purchasers. Competition between suppliers is intense.				
38.		ther components which are unique to the refrigeration industry, Beijer estimates shares e importation and wholesale supply of them on a national basis as:				
	(a)	Realcold: []				

(b)	Patton: []
(c)	Heatcraft: []
(d)	Cooling Equipment: []
(e)	Refrigeration Specialities: []
(f)	Totaline: []

- 39. As a result of the Proposed Transaction the Beijer Group would increase its share in the refrigeration components market to []%.
- 40. However, in both markets the combined entity would continue to face strong competition from the other market participants. The markets are characterised by intense competition between competitors, with low margins, and this is unlikely to change significantly in the factual.
- 41. There are also low barriers to entry or expansion into the two markets, noting that there are:
 - (a) no regulatory barriers;
 - (b) low expansion barriers; and
 - (c) an absence of supply constraints.
- 42. Products are readily interchangeable and parallel importation occurs, for example by LIMS Imports Ltd, meaning that supply arrangements are not a significant barrier.
- 43. The key requirements for entry (and expansion) are suitable staff and stock. There are some minimum order quantities, but they are modest and not a material barrier.
- 44. Access to premises is not necessary for entry or expansion. Customers can order components that are delivered by courier, and sales representatives can be used to expand into different geographic areas. For example, Realcold closed its Whangarei branch because Whangarei customers did not require physical premises in that location. It has been able to maintain sales without having physical premises.
- 45. If the combined entity raised its prices by 5 to 10% after the acquisition, BOC, Heatcraft, Cooling Equipment and/or Refrigeration Specialities could each readily expand to increase its market share. Refrigeration Specialities is an example of a refrigeration components supplier who has recently expanded. After starting in Auckland 4-5 years ago, it has recently commenced operations in Christchurch.
- 46. The combined entity would also face constraint from offshore suppliers that could expand into New Zealand, such as Actrol/Reece, which is a large wholesaler based in Australia which has the capacity to enter the New Zealand market from Australia. As noted above, it could effectively compete without a 'shop front', however, if it wanted one, it could readily use the Reece plumbing stores as its 'shop front'.
- 47. There are recent examples of de novo entry in the market. For example, Cooling Supplies imports containers full of refrigerants and lubricants into Christchurch, and then distributes them on a nationwide basis.
- 48. There are also examples of customers bypassing wholesalers and acquiring components including refrigerants directly themselves. McAlpine, Cowley and EcoChill do this already. The conduct of McAlpine in particular, shows that customers can readily secure supply that meets their needs directly from upstream suppliers of refrigeration component parts.

- 49. Customers closely monitor prices, switch suppliers with relative ease and negotiate more favourable pricing with their preferred suppliers. Supply is typically based on list prices, with additional discount schemes provided to customers based on volumes purchased.
- 50. Accordingly, the Proposed Transaction would not result in a substantial lessening of competition in relation to the importation and wholesale supply of refrigerants or in relation to the importation and wholesale supply of refrigeration components.

Refrigeration equipment Market definition

- 51. Patton and Realcold each undertake assembly of refrigeration equipment, marketed under their own brands. They also design and manufacture refrigeration equipment to suit customer specific requirements.
- 52. The industry overview in **Appendix J** provides information about the key customers of refrigeration equipment. The pre-assembled or specialised equipment supplied by both Patton and Realcold include unit coolers, condensing units and accessories, air cooled condensers and custom-made compressor racks.
- 53. While there are important differences between these distinct types of equipment from a customer point of view, from a supply-side perspective, suppliers are able to readily switch or expand into different types of generic and specialised refrigeration equipment if demand warrants it. Accordingly, Beijer suggests it would be appropriate to adopt a single refrigeration equipment assembly market for the purpose of analysing the competitive impact of the proposed acquisition.

Analysis

54.	Beijer	estimates	shares	for	the	importation	and	wholesale	supply	of	pre-assembled	and
	specia	lised refrige	eration e	quip	omer	nt on a natior	nal ba	asis as:				

(a)	Patton: []	
(b)	Heatcraft: []	
(c)	Realcold: []	
(d)	Cooling Equipment: []	
(e)	Refrigeration Specialties:	1

- 55. As a result of the Proposed Transaction the Beijer Group would increase its market share to []%.
- 56. However, as with refrigeration components, the Beijer Group would face constraint from:
 - (a) Existing competitors that could readily expand, including Heatcraft, Cooling Equipment and Blitzer. Refrigeration Specialities is an example of a refrigeration equipment supplier who has recently expanded. After starting in Auckland 4-5 years ago, it has recently commencing operation in Christchurch.
 - (b) Offshore suppliers expanding into New Zealand. Parallel importing is possible and occurs, for example by Cooling Supplies & LIMS. There is also the potential for offshore suppliers, such as Actrol/Reece to readily expand and enter the New Zealand market and recently a contractor in Nelson has been importing refrigeration equipment directly from China for apple stores in that area.
 - (c) Customers bypassing wholesale suppliers, for example McAlpine, Cowley and EcoChill design equipment that they assemble from components that they import; and

- (d) Countervailing power of customers, such as DTS which is an intermediary that supplies approximately []% of New Zealand dairy farmers. The farmers that do not purchase from DTS acquire refrigeration equipment from around 20 competitors.
- 57. There are no barriers to customers switching from one supplier to another, no exclusive supply arrangements and no regulatory barriers to entry.
- 58. Accordingly, the Proposed Transaction would not substantially lessen competition in relation to the importation and wholesale supply of refrigeration equipment.

High wall split air conditioning units

- 59. Realcold and Patton are each wholesale distributors of high wall split air conditioning units. Realcold distributes Mitsubishi Heavy Industries and Gree branded units, and Patton distributes Mitsubishi Electric branded units. Brands of high wall split air conditioning units that are supplied by competitors include Rinnai, Fujitsu, Panasonic, Daikin, Hitachi, Toshiba, Samsung, Carrier, Haier and LG.
- 60. High wall split air conditioning units and other air conditioning units are arguably supplied in the same market, but, taking a conservative view, Beijer estimates shares for the importation and wholesale supply of high wall split air conditioning units on a national basis as:
 - (a) BDT: []%(b) Fujisu: []%(c) Panasonic: []%(d) Realcold: []%

Patton: []%

- 61. As a result of the Proposed Transaction the Beijer Group's share would increase to only []%. This is well within the Commission's concentration indicators. Participants in the market are also constrained by the threat of new entry. EES is an example of a new entrant to this market.
- 62. Accordingly, Beijer considers that the Proposed Transaction would not substantially lessen competition in relation to the importation and wholesale supply of high wall split air conditioning units.

Air conditioning components

Market definition

63. Realcold and Patton also distribute air conditioning components at a wholesale level.

Analysis

(e)

- 64. Beijer estimates shares for the importation and wholesale supply of air conditioning components on a national basis as:
 - (a) Realcold: []%
 (b) Holyokes: []%
 (c) Smooth-Air: []%
 (d) Heatcraft: []%
 (e) Patton: []%

- As a result of the Proposed Transaction the Beijer Group would increase its market share to []%.
- 66. The factors noted in relation to the Refrigeration components market apply equally to this market.
- 67. Further, while air conditioning components are usually manufactured under a specific brand, they are interchangeable for use in different branded air conditioning units to some extent.
- 68. Accordingly, the Proposed Transaction would not result in any lessening of competition in relation to the importation and wholesale supply of air conditioning components.

Conclusion

- 69. In summary, Beijer's acquisition of Realcold would not result in a substantial lessening of competition in any of the relevant markets because:
 - (a) the combined entity would continue to face strong competition from the other market participants;
 - (b) barriers to entry and expansion are low;
 - (c) there is a real prospect of new entry and/or expansion by other market participants;
 - (d) customers have countervailing power which would constrain the combined entity; and
 - (e) the combined entity is also constrained by customers bypassing wholesalers and acquiring products directly themselves.

COORDINATED EFFECTS

70. The Proposed Transaction will not change the conditions in the markets such that coordination becomes more likely, more complete or more sustainable.

PART 4: CONFIDENTIALITY

Specific information contained in or attached to the notice

- 71. This is a public version of the notice. Confidentiality has been requested for information in the notice that is commercially sensitive to the Applicant. Square brackets denote where confidential information has been removed from this public version.
- 72. The parties request that they be notified if a request is made to the Commission for release of the information under the Official Information Act 1982.

DECLARATION

I, Sameer HANDA, have prepared, or supervised the preparation, of this notice seeking clearance.

To the best of my knowledge, I confirm that:

- all information specified by the Commission has been supplied;
- if information has not been supplied, reasons have been included as to why the information has not been supplied;
- all information known to me that is relevant to the consideration this notice has been supplied;
- all information supplied is correct as at the date of this notice.

I undertake to advise the Commission immediately of any material change in circumstances relating to the notice

I understand that it is an offence under the Commerce Act to attempt to deceive or knowingly mislead the Commission in respect of any matter before the Commission, including in these documents.

Date: 18th Aug 2015

I am an officer of the company and am duly authorised to submit this notice.

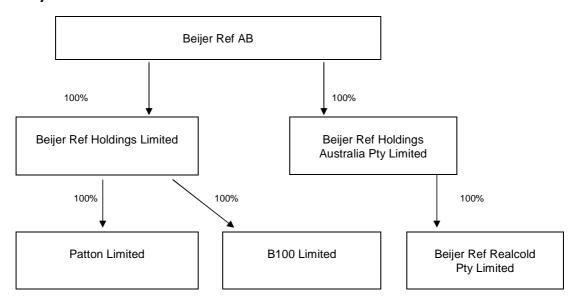
Name and title of person authorised to sign

Sameer HANDA, Director, B100 Limited

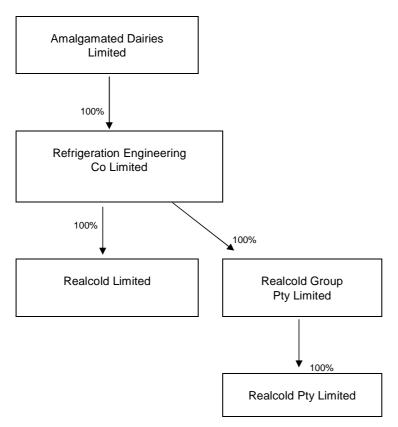
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APPENDIX A: STRUCTURE DIAGRAM

Beijer structure



Realcold Structure



APPENDIX B: AGREEMENT FOR SALE AND PURCHASE OF BUSINESS AND ASSETS [REDACTED]

APPENDIX C: PATTON FINANCIAL STATEMENT - FINANCIAL YEAR ENDED 31 MARCH 2015 [REDACTED]

APPENDIX D: PATTON – SALES BY CUSTOMER AND SPEND BY SUPPLIER [REDACTED]

APPENDIX E: REALCOLD MANAGEMENT ACCOUNTS - FINANCIAL YEAR ENDED 30 JUNE 2015

[REDACTED]

APPENDIX F: REALCOLD - SALES BY CUSTOMER AND SPEND BY SUPPLIER [REDACTED]

APPENDIX G: MARKET PARTICIPANT INFORMATION - COMPETITORS

	Name	Contact details
Competitors	Heatcraft New Zealand Limited	12 George Bourke Drive, Mt Wellington, Auckland 1060
		PO Box 12371, Penrose, Auckland 1642
		(09) 276 4888
		www.heatcraft.com.au
	Cooling Equipment Limited	589 Tremaine Avenue, Palmerston North 4410
		(04) 974 5057
	Refrigeration Specialities	181a Station Road, Penrose, Auckland 1061
		PO Box 17284, Greenlane, Auckland 1546
		(09) 582 0200
		www.refspecs.co.nz
	Panasonic New Zealand Limited	18 Sir Woolf Fisher Drive, Highbrook, East Tamaki, Auckland
		Private Bag 14911, Panmure, Auckland 1741
	Fujitsu General New Zealand Limited	Level 12, Fujitsu Tower 141 The Terrace, Wellington Central 6011
		PO Box 3547, Wellington 6140
		(04) 495-0700
	Daikin	Unit C, 525 Great South Rd, Penrose, Auckland
		(09) 571 1101
		www.daikin.co.nz

Temperzone Limited / Hitachi	38 Tidal Rd, Mangere South 2022
	Private Bag 93303, Otahuhu, Auckland 1640
	(09) 279 5250
	www.temperzone.co.nz
Totaline (c/- AHI Carrier (NZ) Limited)	211 Station Road, Penrose, Auckland 1061
	Private Bag 92128, Victoria St West, Auckland 1142
	Ph: (09) 355 6720
Black Diamond Technologies Limited (BDT)	1 Parliament Street, Melling, Lower Hutt 5010
	PO Box 30772, Lower Hutt 5040
	(04) 560 9147
Smooth-Air Products Limited	264 Annex Rd, Middleton, Christchurch 8024
	PO Box 8358, Christchurch 8440
	(03) 343 6184
	Attention: Allan Doak, Managing Director
BOC New Zealand Holdings Limited	988 Great South Road Penrose, Auckland 1061
	Private Bag 93300, Otahuhu, Auckland 1640
	(09) 525 5600
LIMS Imports Ltd	702 Great South Road, Penrose, Auckland

EXAMPLE OF A POTENTIAL COMPETITOR

	Name	Contact details
Potential competitor	Actrol Pty Limited	19 King Street, Blackburn, Melbourne, Victoria, AUSTRALIA 3130
		Australia 00 61 3 9894 1033

APPENDIX H: MARKET PARTICIPANT INFORMATION - KEY CUSTOMERS

	Name	Contact Details
Customers	ACTIVE REFRIGERATION LIMITED	11 Lunns Rd, Christchurch 8024
		Ph (03) 339 2617
	CENTIGRADE LIMITED	17 Tui Street, Matamata
		PO Box 130, Matamata
		(07) 888 7345
	COWLEY SERVICES LIMITED	1 Gabador Place, Mt Wellington, Auckland 1060
		PO Box 13-782, Onehunga, Auckland 1643
		0508 232 1338
	DAIRY TECHNOLOGY SERVICES LIMITED	709 Te Rapa Road, Saint Andrews, Hamilton City
		(07) 850 5172
	ECOCHILL LIMITED	6 Hotunui Dr, Mt Wellington Auckland 1060
		PO Box 132-361 , Sylvia Park, Auckland 1644
		(09) 276 3287
	MCALPINE HUSSMANN LIMITED	2-6 Niall Burgess Road Mt Wellington, Auckland
		PO Box 12-303, Penrose, Auckland
		(09) 526-6800
	WHITE REFRIGERATION (1988) LIMITED	17 Westmoreland St West Grey Lynn Auckland 1021
		PO Box 78051 Grey Lynn Auckland 1245
		(09) 376 5680
	YATES CORPORATION LIMITED	Flat 1, 24 Honan Place, Avondale, Auckland 1026
		(022) 639 1165

APPENDIX I: MARKET PARTICIPANT INFORMATION – KEY SUPPLIERS

	Name	Product	Contact Details
Suppliers	Copeland	Semi-Hermetic & Scroll Compressors	Copeland Corporation LLC 500 Conrad C. Harcourt Way Rushville, IN 46173, USA
	Embraco North America	Hermetic Compressors	www.emersonclimate.com Sales/Commercial Office 1610 Satellite Boulevard, Suite B, Duluth, GA 30097, USA
	Aeroflex	Insulation	www.embrac.com Aeroflex USA, Inc. 282 Industrial Park Road, Sweetwater, TN 37874, USA
	Danfoss	Refrigeration & AC	www.aeroflexusa.com Danfoss A/S, DK-6430 Nordborg, Denmark
	Emerson Climate Technologies	Flow Controls	www.danfoss.com 1675 West Campbell Road Sidney, OH 45365-0669 USA
	Dixell	Electronic Controls	www.emersonclimate.com Via Dell' industria, 27 - Z.I. 32010 Pieve d'Alpago (BL) Italy
	Mitsubishi Electric Corporation	Air Conditioning	Email: dixell@emerson.com Tokyo Building, 2-7-3, Marunouchi, Chiyoda-ku, Tokyo 100-8310,
	GEA Process Engineering Limited	Brazed Plate Heat Exchangers	Japan www.mitsubishielectric.com 8 Fisher Crescent, Mount Wellington, Auckland
	, ,		PO Box 12479, Penrose, Auckland 1642
	Hidria	External Rotor Fans	www.gea.com Nazorjeva 6a, 1000 Ljubljana, Slovenia www.hidria.com
	Frascold	Screw & Semi- Hermetic	Italy

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Dath and an	Compressors	www.frascold.it
Rothernberger	Tools	Australian Office:
		Unit 6,
		13 Hoyle Avenue
		NSW 2154
		Castle Hill
		www.rothernberger.com
Henry Technologies	Oil Components	Australian Office:
	· ·	25 Tullamarine Park Road
		Tullamarine
		Victoria
		Australia 3043
		7 14011 4114 00 10
		www.henrytech.com.au
Castel Airco	Air Conditioning	Rue de la Royenne 84, 7700
Castel AllCo	Accessories	Mouscron, Belgium
	Accessories	Wodscroff, Deiglaff
		www.castal-angingaring.com
Zial Abaga	Fans	www.castel-engineering.com
Ziel-Abegg	rans	Heinz-Ziehl-Straße, 74653
		Künzelsau
	T . 0 D .	www.ziehl-abegg.com
Uniweld	Test & Brazing	2850 Ravenswood Rd, Fort
	Equipment	Lauderdale, FL. 33312, USA
		www.uniweld.com
Hitachi Appliances	Rotary	International Sales
	Compressors	Department
		17F, NewPier Takeshiba
		South Tower
		1-16-1 Kaigan,
		Minatoku,
		Tokyo, 105-0022
		Japan
		www.hitachi-ap.com
Fieldpiece	Test Equipment	PO Box 145, Swansea NSW
		2281, Australia
		www.fieldpiece.com.au
Paragon	Defrost Controls	2371 Circadian Way, Santa
		Rosa, CA 95407, USA
		www.paragoncontrols.com
Aquatherm Heating	Pipe System,	36 Rockridge Ave, Penrose,
Systems New Zealand	Fittings & Tools	Auckland 1061,
Limited		,
		(09) 570 7204
		(, 0. 00 .
		www.aquatherm.co.nz
Johnson Controls	System Controls	11a Paul Matthews Road,
Auckland Limited	Cystom Controls	Rosedale, Auckland 0632
, aonara Emilea		11000daio, 71doniario 0002
		(09) 444 6434
		(03) 444 0434
		www.iohnconcentrals.com
	l	www.johnsoncontrols.com

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Refrigeration Research	Accumulators	525 North Fifth Street, P.O. Box 869, Brighton, Michigan 48116, USA
Aspen Pumps	Condensate Pumps	www.refresearch.com Apex Way, Hailsham, East Sussex, BN27 3WA United Kingdom
		www.aspenpumps.com
Refrigerant Oil Company Pty. Ltd (PAOIL Australia)	Lubricants	3 - 5 Sabre Court, Tullamarine Victoria 3043, Australia
,		·
		www.rocoil.com
Appion Star	Vacuum Pumps	2800 South Tejon Street
Performance	& Recovery Equipment	Englewood, CO 80110 USA
		www.appioninc.com
Emkarate RL (CPI Fluid	Lubricants	The Lubrizol Corporation
Engineering)		2300 James Savage Road Midland, MI 48642, USA
		www.cpieng.com
CoolMax (Guangzhou Zhenhan Refrigeration and Warm Co. Ltd – China)	Tools	www.zh318.com
JB Industries	Brass Fittings	PO Box 1180
		Aurora, IL 60507-1180 USA
		www.jbind.com
SUPCO (Sealed Unit Parts Co., Inc.)	Electronic Equipment	PO Box 21, 2230 Landmark Place, Allenwood, NJ 08720 USA
		www. supco.com
Vilter (Emerson Climate Technologies)	Compressors	1675 West Campbell Road Sidney, OH 45365-0669 USA
		www.emersonclimate.com
SUNISO (Subsidiary of Petrons Lubricants International)	Lubricants	www.sunoco.be
Beckett Corporation	Condensate Pumps	Beckett Corporation, 3250 N Skyway Circle Dr, Irving, TX 75038, USA
ODC	Task Fauriness and	www.beckettpumps.com
CPS	Test Equipment	1010 East 31st Street, Hialeah, Florida 33013, USA
		www.cpsproducts.com

Ranco (Eliwell Controls Srl)	Controls	Via dell' Industria, 15 Z. I. Paludi, 32010 Pieve d' Alpago (BL) - Italy
		www.eliwell.it
REFCO	Tools & Test	66 B Industry Avenue
	Equipment	Springfield MA 01104
		USA
		www.refco.ch/us
CMG (CMG Electric	Motors	18 Jomac Place,
Motors (New Zealand)		Avondale
Ltd)		Auckland 1026
		WWW om agroup com
Ebm-papst	Fans & Motors	www.cmggroup.com ebm-papst A&NZ Pty Ltd
Ebin-papsi	rans & Molors	Unit H, 61 Hugo Johnston
		Drive, Penrose, Auckland
		1061
		(09) 525 0245
	<u> </u>	www. ebmpapst.com.au
Sterile-Care Pty Ltd	Chemicals	17/6 Abbott Rd,
		Seven Hills NSW 2147,
		Australia
		Ph +61 2 9674 8849
Tecumseh	Compressors,	5683 Hines Drive, Ann Arbor
1 dddiniddin	Condensing	MI, 48108, USA
	Units	, 10100, 007
		www.tecumseh.com
Meuller Industries	Copper Tube	8285 Tournament Dr., Suite
		150
		Memphis, TN 38125
		USA
Gree	Air Conditioning	www.muellerindustries.com www.greeac.com
Air Comfort Systems	Pair Coil	www.hvacacs.com
Toyo Densen	Air Conditioning	www.toyodensen.com.tw
. 5,0 50110011	Trunking	
Hailiang	Copper and	Diankou Down, Zhuji City,
3	copper alloy	Zhejiang Province, China
	products. Pre-	· · · · · ·
	insulated copper	www.hailiang.us
	tubes.	
Sampo	Copper Tubes	12F Hyungin Tower, 23-2
		Bangyee-dong, Songpa-gu,
		Seoul, Korea
		www. sampotube.com

APPENDIX J: REFRIGERATION INDUSTRY OVERVIEW

The refrigeration industry has four key segments:

- · Domestic: Fridges and freezers used for domestic purposes.
- Industrial: Large scale refrigeration systems used in large factories (eg, freezing works).
 Refrigerant is typically ammonia based.
- Trasport/mobile: Small scale refrigeration systems used on trucks, shipping containers and trains.
- Commercial: Versatile medium scale refrigeration systems used across multiple industries.
 Key applications include:
 - (a) dairy / milk chilling;
 - (b) kiwifruit and produce cool stores;
 - (c) food production;
 - (d) food and beverage;
 - (e) supermarkets and liquor store chillers and cabinets; and
 - (f) specific refrigeration needs of wineries and breweries.