PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

Assignment ID: PATI800510

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
Copeland Industrial LP	02/03/2025

RECEIVING PARTY DATA

Company Name:	Royal Bank of Canada, as Collateral Agent
Street Address:	155 Wellington Street West
Internal Address:	8th Floor
City:	Toronto
State/Country:	CANADA
Postal Code:	M5JV 3K7

PROPERTY NUMBERS Total: 6

Property Type	Number
Application Number:	18675800
Application Number:	18675818
Application Number:	18796746
Application Number:	18833302
Application Number:	18833306
Application Number:	17869323

CORRESPONDENCE DATA

Fax Number: 2127514864

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2129061209
Email: jess.bajada-bartlett@lw.com
Correspondent Name: Mrs. Jessica Bajada-Bartlett
Address Line 1: 1271 Avenue of the Americas
Address Line 4: New York, NEW YORK 10020

ATTORNEY DOCKET NUMBER:	049275-0234
NAME OF SUBMITTER:	Jessica Bajada-Bartlett
SIGNATURE:	/Jessica Bajada-Bartlett/
DATE SIGNED:	02/04/2025

Total Attachments: 12
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PATENT SECURITY AGREEMENT

Patent Security Agreement, dated as of February 3, 2025 (the "**Patent Security Agreement**"), by Copeland LP, Copeland Comfort Control LP, Copeland Cold Chain LP, Copeland Industrial LP, and Copeland Scroll Compressors LP (each a "**Grantor**" and, collectively, the "**Grantors**"), in favor of Royal Bank of Canada, in its capacity as Collateral Agent for the Secured Parties pursuant to the Credit Agreement (in such capacity, the "**Collateral Agent**").

W I T N E S S E T H:

WHEREAS, each Grantor is party to a Security Agreement dated as of May 31, 2023 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "**Security Agreement**") in favor of the Collateral Agent pursuant to which each Grantor is required to execute and deliver this Patent Security Agreement.

NOW, THEREFORE, in consideration of the premises and to induce the Collateral Agent, for the benefit of the Secured Parties, to enter into the Credit Agreement, each Grantor hereby agrees with the Collateral Agent as follows:

SECTION 1. Defined Terms. Unless otherwise defined herein, terms defined in the Security Agreement and used herein have the meaning given to them in the Security Agreement.

SECTION 2. Grant of Security Interest in Patent Collateral. As security for the payment or performance, as the case may be, in full of the Secured Obligations, including the Guaranty (as defined in the Credit Agreement), each Grantor hereby assigns and pledges to the Collateral Agent, for the benefit of the Secured Parties, and hereby grants to the Collateral Agent for the benefit of the Secured Parties, a security interest (the "**Security Interest**") in, all right, title or interest in or to any and all of the following assets and properties now owned or at any time hereafter acquired by such Grantor or in which such Grantor now has or at any time in the future may acquire any right, title or interest:

(a) all Patents of the Grantor, including those listed on Schedule I attached hereto,

(b) all income, fees, royalties, damages, claims and payments now and hereafter due and/or payable with respect thereto, including damages and payments for past, present or future infringements or other violations thereof,

(c) the right to sue for past, present and future infringements and other violations thereof, and

(d) all other rights, priorities and privileges accruing thereunder or pertaining thereto throughout the world.

SECTION 3. The Security Agreement. The Security Interest granted pursuant to this Patent Security Agreement is granted in conjunction with the Security Interest granted to the Collateral Agent pursuant to the Security Agreement and each Grantor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the Security Interest in the Patents made and granted hereby are more fully set forth in the Security Agreement. In the event that any provision of this Patent Security Agreement is deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall control unless the Collateral Agent shall otherwise determine.

SECTION 4. Termination. Upon the termination of the Security Agreement in accordance with Section 6.11 thereof, the Collateral Agent shall, at the expense of the Grantors, execute, acknowledge, and

deliver to the Grantors an instrument reasonably requested by the Grantors in writing in recordable form releasing the Lien on and Security Interest in the Patents under this Patent Security Agreement.

SECTION 5. Counterparts. This Patent Security Agreement may be executed in any number of counterparts, all of which shall constitute one and the same instrument, and any party hereto may execute this Patent Security Agreement by signing and delivering one or more counterparts. Delivery of an executed signature page to this Patent Security Agreement by facsimile or other electronic transmission shall be effective as delivery of a manually signed counterpart of this Patent Security Agreement.

SECTION 6. Intercreditor Agreements. Notwithstanding any provision to the contrary contained herein, the terms of this Patent Security Agreement, the Liens created under the Security Agreement and the rights and remedies of the Collateral Agent hereunder are subject to the terms of each applicable Intercreditor Agreement. In the event of any conflict or inconsistency between the terms of this Patent Security Agreement and an Intercreditor Agreement, the terms of that Intercreditor Agreement shall govern.

SECTION 7. Governing Law. THIS PATENT SECURITY AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK.

[Signature pages follow.]

COPELAND LP, as a Grantor

By COPESUB GP 2, LLC, its General Partner

By: Signed by: Christine E. Carney A77BD0890E3A476...
Name: Christine Carney
Title: Vice President, Chief Legal Officer & Secretary

COPELAND SCROLL COMPRESSORS LP, as a Grantor

By COPESUB GP 2, LLC, its General Partner

By: Signed by: Christine E. Carney A77BD0890E3A476...
Name: Christine Carney
Title: Vice President, Chief Legal Officer & Secretary

COPELAND INDUSTRIAL LP, as a Grantor

By COPESUB GP 2, LLC, its General Partner

By: Signed by: Christine E. Carney A77BD0890E3A476...
Name: Christine Carney
Title: Vice President, Chief Legal Officer & Secretary

COPELAND COMFORT CONTROL LP, as a Grantor

By COPESUB GP 1, LLC, its General Partner

By: Signed by: Christine E. Carney A77BD0890E3A476...
Name: Christine Carney
Title: Vice President, Chief Legal Officer & Secretary

COPELAND COLD CHAIN LP, as a Grantor

By COPESUB GP 1, LLC, its General Partner

By: Signed by: Christine E. Carney A77BD0890E3A476...

Name: Christine Carney
Title: Vice President, Chief Legal Officer & Secretary

ROYAL BANK OF CANADA, as Collateral Agent

By: _____

Name: Weizhe Dong
Title: Deal Manager

Schedule I
to
PATENT SECURITY AGREEMENT
PATENTS AND PATENT APPLICATIONS

U.S. Patents and Patent Applications

Title	Country	Application Number	Patent Number	Owner
Thermal Barriers For Compressor Discharge Chambers Or Cavities	United States of America	63/557,131		Copeland LP
Demand Defrost	United States of America	18/442,728		Copeland Cold Chain LP
Multiple-Compressor System	United States of America	18/621,082		Copeland LP
BEARING AND UNLOADER ASSEMBLY FOR COMPRESSORS	United States of America	18/438,026		Copeland LP
Low Power Detection and Power Loss Management for Devices with Limited Available Power	United States of America	18/596,928		Copeland Comfort Control LP
Compressor Assemblies Including Lower Covers Having Mounting Feet Skirts Configured For Increasing Mounting Feet Stiffness And Resistance To Crack Formation	United States of America	18/584,133		Copeland LP
THREE-WAY HEAT EXCHANGE MODULE WITH CONTROLLED FLUID FLOW	United States of America	18/585,344		Copeland LP
Hybrid Heat-Pump System	United States of America	18/440,449		Copeland LP
Mechanism to Increase Impeller Optimum Range: Economization & VIGV	United States of America	18/613,762		Copeland LP
Foil Bearing Assembly Including Bidirectional Anti-Rotation Features and Compressor Including Same	United States of America	18/617,018		Copeland LP
Vapor Compression System With An Atomization Mechanism	United States of America	18/625,635		Copeland LP
Compressor Having Capacity Modulation System	United States of America	63/635,270		Copeland LP
Indoor Air Quality Sensor Calibration Systems And Methods	United States of America	18/639,935		Copeland LP
Climate Control Systems For Use With High Glide Working Fluids And Methods For Operation Thereof	United States of America	18/647,850		Copeland LP

Title	Country	Application Number	Patent Number	Owner
Open Air-Cycle Ventilating Heat Pump	United States of America	18/652,183		Copeland LP
Conditioning System Including Vapor Compression System and Evaporative Cooling System	United States of America	18/653,095		Copeland LP
Surge Control Systems and Methods for Dynamic Compressors	United States of America	18/657,199		Copeland LP
Climate-Control System With Sensible and Latent Cooling	United States of America	18/671,326		Copeland LP
AUTO-POSITIONING VOLUME SLIDE CONTROL FOR SCREW COMPRESSOR	United States of America	18/675,800		Copeland Industrial LP
Auto-positioning Volume slide control with feedback for single screw compressor	United States of America	18/675,818		Copeland Industrial LP
Refrigeration System Having High-Efficiency Loop	United States of America	18/741,002		Copeland LP
RECIPROCATING COMPRESSOR AND FLUID INJECTION SYSTEM	United States of America	18/750,378		Copeland LP
Compressor Having Shutdown Valve Assembly	United States of America	18/753,630		Copeland LP
MONITORING ENVIRONMENTAL CONDITIONS OF STORAGE UNITS FOR VACCINES AND OTHER CLIMATE SENSITIVE PRODUCTS	United States of America	18/755,080		Copeland Cold Chain LP
Systems and Methods For Wirelessly Configuring Climate Control System Controls	United States of America	18/764,442		Copeland Comfort Control LP
Compressor Scroll Design Optimization with Variable Performance Single Phase Induction Motor	United States of America	18/768,718		Copeland Scroll Compressors LP
Low ratio oil injection port for applications without the requirement of an oil pump	United States of America	18/796,746		Copeland Industrial LP

Title	Country	Application Number	Patent Number	Owner
Freeze protection for wireless HVAC system .	United States of America	18/802,203		Copeland Comfort Control LP
SPARK IGNITION MODULE AND METHODS	United States of America	18/773,016		Copeland Comfort Control LP
Systems And Methods For Adjusting Mitigation Thresholds	United States of America	18/773,983		Copeland LP
Variable Inlet Guide Vane Apparatus and Compressor Including Same	United States of America	18/806,303		Copeland LP
Reciprocating Compressor And Fluid Injection System	United States of America	18/809,546		Copeland LP
RECIPROCATING COMPRESSOR AND FLUID INJECTION SYSTEM	United States of America	18/809,678		Copeland LP
SYSTEM AND METHOD FOR HEATING OR COOLING EMPLOYING HEAT PUMP	United States of America	18/833,302		Copeland Industrial LP
SYSTEM AND METHOD FOR HEATING OR COOLING EMPLOYING HEAT PUMP	United States of America	18/833,306		Copeland Industrial LP
ENERGY MANAGEMENT AND SMART THERMOSTAT LEARNING METHODS AND CONTROL SYSTEMS	United States of America	17/823,150		Copeland Comfort Control LP
Buck-Converter-Based Drive Circuits For Driving Motors Of Compressors And Condenser Fans	United States of America	17/849,564	12,136,872	Copeland LP
Self-Positioning Volume Slide Valve for Screw Compressor	United States of America	17/869,323	12,055,145	Copeland Industrial LP
Scroll Compressor With Center Hub	United States of America	17/886,047	11,846,287	Copeland LP
Systems and Methods For Providing Compressor Cooling	United States of America	17/930,807	12,188,701	Copeland LP
Mass Flow Interpolation Systems and Methods for Dynamic Compressors	United States of America	17/933,237		Copeland LP
Wirelessly Configuring Climate Control System Controls	United States of America	17/947,807		Copeland Comfort Control LP

Title	Country	Application Number	Patent Number	Owner
Method to Detect Ignitor Open Error and Inducer and Ignitor Relay Faults	United States of America	18/377,678	12,060,944	Copeland Comfort Control LP
Wirelessly Configuring Climate Control System Controls	United States of America	18/380,493		Copeland Comfort Control LP
Scroll Compressor With Center Hub	United States of America	18/381,884	12,188,470	Copeland LP
Method To Charge Multiple Refrigerants With Desired Concentrations	United States of America	18/382,464		Copeland LP
Systems and Methods For Assembling Liquid Desiccant Air Conditioner Panels Using Flexible Alignment Features	United States of America	18/390,475		Copeland LP
Liquid Desiccant Air Conditioner Modules Having Aerodynamic Features	United States of America	18/390,941		Copeland LP
Liquid Desiccant Air Conditioner Modules Having Interlocking Panels for Controlling Airflow	United States of America	18/390,948		Copeland LP
Liquid Desiccant Air Conditioner Modules Having a Liquid Desiccant Mist Trap	United States of America	18/391,384		Copeland LP
Multi-Stage Liquid Desiccant Dehumidification Systems and Methods	United States of America	18/391,439		Copeland LP
Compressor With Shutdown Assembly	United States of America	18/394,474		Copeland LP
Liquid Desiccant Regeneration Systems and Methods Including Air Diffuser	United States of America	18/409,327		Copeland LP
Motor Cooling Flow Alarm	United States of America	18/416,259		Copeland LP
Scroll Assemblies and Compressors Including the Same	United States of America	18/481,802		Copeland LP
Three-Way Heat Exchange Module Having Uniform Fluid Distribution	United States of America	18/482,454		Copeland LP
AntiRotation Reed Valve Systems And Methods For Compressors	United States of America	18/485,712	12,180,967	Copeland LP

Title	Country	Application Number	Patent Number	Owner
Compressor Having Compression Subassembly And Methods Of Assembling The Same	United States of America	18/485,911		Copeland LP
Climate Control Systems Having A Liquid-To-Suction Heat Exchanger, An Accumulator, And A Receiver For Variable Liquid Storage Of High Glide Working Fluids And Methods For Operation Thereof.	United States of America	18/507,523		Copeland LP
Foil Bearing Assembly Including Perforated Inner Foil Assembly and Compressor Including Same	United States of America	18/509,780		Copeland LP
Systems and Methods For Supplying Stored Heat To A Vapor Compressor	United States of America	18/516,307		Copeland LP
Adaptive Undervoltage Protection for 3-Phase Loads using Singe Current Sensor	United States of America	18/529,297		Copeland Comfort Control LP
Compressor With Funnel Assembly	United States of America	18/530,916	12,180,966	Copeland LP
Heat Pump Systems With Capacity Modulation	United States of America	18/533,121	12,173,708	Copeland LP
Compressor And Valve Assembly	United States of America	18/541,828	12,163,523	Copeland LP
HVAC Control Assemblies And Corresponding Methods Of Configuring Pinout Of Connectors For HVAC Control Assemblies	United States of America	18/545,331		Copeland Comfort Control LP
HVAC Control Assemblies And Corresponding Methods Of Automatic Detection Of Furnace Applications	United States of America	18/545,342		Copeland Comfort Control LP
Full Round CWT Cover	United States of America	18/602,626		Copeland LP (ECT)
Remote Sensor Ornamental Design	United States of America	29/916,038	D1,026,680	Copeland Comfort Control LP
Systems and Methods For Assembling Liquid Desiccant Heat Exchange Structures Using Controlled Multilayer Welding	United States of America	63/612,925		Copeland LP
CO2 Low Ambient Control	United States of America	63/615,936		Copeland LP

Title	Country	Application Number	Patent Number	Owner
Using Setpoint Changes to Defrost the Evaporator Coil	United States of America	63/625,793		Copeland LP
Modulating System Heating or Cooling Capacity by Controlling the Critical Temperature of a Blend of Multiple Refrigerant Fluids with Large Critical Temperature Differences	United States of America	18/931,981		Copeland LP
SYSTEM AND METHOD FOR REDUCED ENERGY LOGGER MODE FOR POWERED TRACKERS	United States of America	18/933,863		Copeland Cold Chain LP
Vapor-Liquid Separator and Systems Including Same	United States of America	18/933,846		Copeland LP
Drive Assemblies and Compressors Including the Same	United States of America	18/951,381		Copeland LP
Retainer Clip	United States of America	29/974,355		Copeland LP
Heat Pump Systems With Capacity Modulation	United States of America	18/954,717		Copeland LP
SYSTEM AND METHOD FOR ULTRA-LOW FIRE GAS HEAT ALGORITHMS	United States of America	18/970,036		Copeland Comfort Control LP
Compressor Startup Pressure Ratio	United States of America	18/970,272		Copeland LP
AntiRotation Reed Valve Systems And Methods For Compressors	United States of America	18/970,300		Copeland LP
Systems and Methods For Assembling Liquid Desiccant Heat Exchange Structures Using Controlled Multilayer Welding	United States of America	18/982,123		Copeland LP
CO2 Low Ambient Control	United States of America	19/003,803		Copeland LP
CO2 Flash Tank Pressure Secondary Control (Using Gas Cooler Setpoint)	United States of America	19/003,786		Copeland LP
COMPRESSOR INCLUDING MOTOR WITH STATOR COOLING FINS AND REFRIGERATION SYSTEMS INCLUDING SAME	United States of America	19/010,841		Copeland LP

Title	Country	Application Number	Patent Number	Owner
COOLING CIRCUITS FOR COMPRESSORS AND COMPREXSORS INCLUDING SAME	United States of America	19/010,796		Copeland LP
Compressor for Refrigeration System Including Internal Coolant Return Line	United States of America	19/010,886		Copeland LP
COOLING CIRCUITS FOR COMPRESSORS AND COMPRESSORS INCLUDING SAME	United States of America	19/010,937		Copeland LP
METHODS AND SYSTEMS FOR CONTROLLING A COMPRESSOR COOLING SYSTEM	United States of America	19/010,907		Copeland LP
Centrifugal Compressor with Controlled Tolerance Stack and Methods of Assembling the Same	United States of America	19/012,463		Copeland LP
Using Setpoint Changes to Defrost the Evaporator Coil	United States of America	19/032,833		Copeland LP
Variable Inlet Guide Vane Apparatus And Systems And Methods For Calibrating The Same	United States of America	19/034,340		Copeland LP
Multi-Function Heat Pump with Thermal Storage	United States of America	63/734,440		Copeland LP
Magnetic High Voltage Interlock Loop (HVIL) for Variable Frequency Drives in Transport Applications	United States of America	18/377,474		Copeland LP
Three-Way Heat Exchange Module With Controlled Clamping Of Panel Assemblies	United States of America	18/490,984		Copeland LP