



CONTRACT

TO: Canopy Growth Coiporation
1 Hershey Drive
Smith Falls, Ontario, K7A OA8

Our Ref. No.: 17-Q-22939D
Your Ref. No.: N/A
Date: December 4th, 2017

Exhibits

Pose ATo.

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BEPEX INTERNATIONAL LLC

CANOPY GROWTH CORPORATION

By: _____

By: _____

Title _____

Title _____

Address for All Notices:

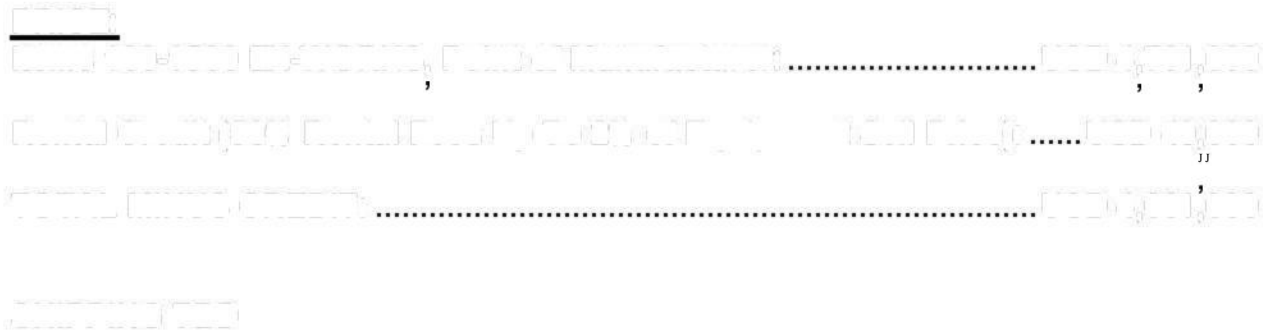
Address for All Notices:

Bepex International
333 N.E. Taft Street
Minneapolis, MN 55413



EQUIPMENT DESCRIPTION/PRICE

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
100	1	Bepex Disintegrator Grinder, Model RP-12
200	1	Bepex Solidaire Dryer, Model SJS 42-22
300	1	Bepex Solidaire Cooler, Model SJS 16-10
400	1	Volumetric Feeder
500	1	Discharge Rotary Valve
600	1	Bin Vent Filter
700	1	Condenser
800	1	Recycle Gas Blower
900	1	Recycle Electric Gas Heater
1000	1	Natural Gas Fired Hot Oil Heater
1100	1	Chiller
1200	1	Wet Scrubber
1300	1	Controls and Instrumentation Package
1400	1	System Engineering
1500	1	Bepex Startup Support





EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
100		<p><u>BEPEX DISINTEGRATOR GRINDER DESIGNED AND CONSTRUCTED AS FOLLOWS:</u></p> <ul style="list-style-type: none"> A. 304 Stainless Steel construction with standard Bepex #300 finish. B. Rectangular or Round chute inlet and rectangular outlet. Safety limit switch mounted on Disintegrator to prevent cover removal during operation (field wiring by customer). C. Horizontal discharge with rectangular opening. D. One 304 stainless steel sizing screen. E. Spaced stack hard-faced stainless steel hammers. F. One 30 kW CLASS I DIV II GROUPS C&D & CLASS II DIV II GROUPS F&G, 1800 RPM, direct drive CSA stamped motor. TEFC, designed for 3Ph/600V/60Hz operation. G. Standard angle motor base. H. Dimensions (approximate) <ul style="list-style-type: none"> a. Length: 1.0 m b. Width: 0.6 m c. Height: 1.2 m
200		<p><u>BEPEX SOLIDA1RES, MODEL SJS 42-22 DESIGNED AND CONSTRUCTED AS FOLLOWS:</u></p> <ul style="list-style-type: none"> A. Rotor construction with four rows of manually adjustable conveying paddles. Approximately 275 RPM shaft speed. Rotor is constructed of 304SS. B. Vessel body is cylindrical shaped with flanged end plates, rated for +/- 0.3 barg internal pressure, 288°C. Vessel is constructed of 304SS for product contact with 304SS saddle supports. C. Feed inlet is a side nozzle and product discharge is tangential with respect to rotor rotation.

EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
		D. Solidaire jacket is ASME rated for 3.4 barg, 288°C, “U” and “CRN” stamped. Jacket has four sections, designed for hot oil service. Each section has flanged inlet and outlet connections, one drain coupling connection, and one vent coupling connection. Jacket is constructed of 304SS.
		E. Shaft seals are gas purged stuffing box seals with nitrogen purge gas. Seals are constructed of 304 stainless steel with PTFE braided packing.
		F. Outboard bearings are spherical roller/tapered, self-aligning, with pillow block housings. Grease lubricated. L-10 life is 50,000 hours.
		G. All gaskets to be Food Grade PTFE.
		H. Rotor is belt driven. Motor is a premium efficiency 56 kW CLASS I DIVII GROUPS C&D & CLASS II DIVII GROUPS F&G, 1800 RPM, 600V/3Ph/60Hz, motor and CSA marked.
		I. Dimensional Data (approx.) - without motor/drive:
		Length: 10.3 m
		Width: 1.5 m
		Height: 1.5 m
		Weight: 7,000 kg

300

BEPEX SOLIDAIRE COOLER, MODEL SJS 16-10 DESIGNED AND CONSTRUCTED AS FOLLOWS:

- A. Rotor construction with two rows of manually adjustable conveying paddles. Approximately 800 RPM shaft speed. Rotor is constructed of 304SS.
- B. Vessel body is cylindrical shaped with flanged end plates, rated for +/-0.3 barg internal pressure, -7°C to 288°C. Vessel is constructed of 304SS for product contact with 304SS saddle supports.
- C. Feed inlet and product discharge are tangential with respect to rotor rotation.

EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
		D. Solidaire jacket is ASME rated for 3.4 baig, -7°C to 100°C, and “U” and “CRN” stamped. Jacket has two sections, designed for liquid service. Each section has flanged inlet and outlet connections, one drain coupling connection, and one vent coupling connection. Jacket is constructed of 304SS.
		E. Shaft seals are lip seals with nitrogen purge gas. Seals are constructed of 304 stainless steel.
		F. Outboard bearings are spherical roller/tapered, self-aligning, with pillow block housings. Grease lubricated. L-10 life is 50,000 hours.
		G. All gaskets to be Food Grade PTFE.
		H. Rotor is belt driven. Motor is a premium efficiency 3.75 kW CLASS I DIV II GROUPS C&D & CLASS II DIV II GROUPS F&G, 1800 RPM, 600V/3Ph/60Hz.
		I. Dimensional Data (approx.) - without motor/drive: Length: 4.6 m Width: 0.6 m Height: 0.7 m Weight: 875 kg

400



VOLUMETRIC FEEDER

- A. Designed to feed 130 kg/m³ at 313 kg/hr. Stainless steel and food grade polymer materials of construction for product contact surfaces. Motor is designed for CLASS I DIV II GROUPS C&D & CLASS II DIV II GROUPS F&G, 600V/3ph/60Hz.



EXHIBIT "D"

EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
500		<p><u>DISCHARGE ROTARY VALVE</u></p> <p>A. Open ended fixed rotary valve with stainless steel internal surfaces and stainless steel housing. Inlet and outlet flanges are round and drilled with ANSI pattern.</p> <p>B. 600V/3Ph/60Hz CLASS I DIVII GROUPS C&D & CLASS II DIV II GROUPS F&G motor with drive reduction and CSA marking. Stainless steel guard included.</p> <p>C. Nitrogen purged shaft seals with TFE lantern rings and Teflon packing. Includes gas purge controls (flowmeter, regulator, and gauge).</p>
600		<p><u>BIN VENT FILTER</u></p> <p>A. 304SS material on product and gas contact surfaces, including support cages. External carbon steel surfaces are primed and painted.</p> <p>B. Approximate dimensions are 1.2m diameter x 2.3m tall with jacketed housing ASME and CRN rated for 3.4 barg at 288°C for liquid service. Bin vent to mount directly to Solidaire dryer with no size transition from the diameter of the filter housing. Jacketed housing to be provided by Bepex International.</p> <p>C. 15 cm Nomex filter bags, accessed through clamped roof. No tool removal, snap band design. Bags are rated for 204°C. Cage support with bottom pans.</p> <p>D. Reverse-pulse cleaning system. Three (3) 1/8" diameter solenoid valves mounted in a Nema 4X enclosure (110V).</p> <p>E. Taps to be provided for a differential pressure transmitter.</p>



EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
700		<p><u>CONDENSER</u></p> <p>A. All 304 stainless steel construction. Shell and U-tube design. TEMA class C. For service with 50% ethylene glycol and water coolant mixture at 2°C.</p> <p>B. 304 SS shell. Design tubeside for 10.3 barg @ 93°C, design shell side for FV/10.3 barg at 93°C. Includes ASME “U” stamp, “CRN” stamp and shell supports.</p> <p>C. Connections as follows: Tubeside: One (1) 150# ANSI Flange and two (2) 50# ANSI flanges. Shellside: Two (2) 150# ANSI flanges.</p> <p>D. Includes outlet mist eliminator.</p>
800		<p><u>RECYCLE GAS BLOWER</u></p> <p>A. 304SS gas-contact construction. Housing drain for condensation included.</p> <p>B. 2.3 kW, 600V/3Ph/60Hz, CLASS I DIV II GROUPS C&D & CLASS II DIV II GROUPS F&G, TEFC, CSA marked premium efficiency, inverter duty direct drive motor.</p>
900		<p><u>NITROGEN HEATER</u></p> <p>A. 304 Stainless steel pipe body vessel design rated for 6 kW loading. High temperature pipe insulation inside protective outer jacket. NPT connections for process and electrical connections.</p> <p>B. Cartridge heater element design consists of Incoloy sheath and spiral wound baffle for efficient heat transfer. Integral over temperature protection using a thermocouple located inside the cartridge heating element sheath.</p>



EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
1000		<p><u>HOT OIL HEATER DESIGNED AND CONSTRICTED AS FOLLOWS:</u></p> <p>A. Thermal fluid heater</p> <ul style="list-style-type: none"> a. Designed and stamped per ASME and CRN b. Carbon steel plate shell externally insulated with ceramic fiber insulation and covered with aluminum cladding. c. Saddle mounted heater, burner, fuel train, heater mounted instruments and control panel will be completely pre-piped, pre-wired and factory tested (simulated operation) prior to shipment. d. Burner is gas fired, high turndown and contains combustion air fan and fuel/air control system. Burner is mounted to the heater and pre-wired to the control panel e. The fuel train is a pre-piped and pre-wired manifold and includes: <ul style="list-style-type: none"> i. primary pressure regulator ii. safety shut-off valves for primary line shut-off iii. FO vent valve for primary line vent iv. manual isolation ball valves for primary line isolation v. strainer for inlet fuel gas filtration vi. high & low gas pressure switch vii. pressure gauges with gauge valves for primary line indication <p>B. Heater control panel and burner management system</p> <ul style="list-style-type: none"> a. Designed to meet current NFPA. b. Area classification: Unclassified c. Includes a locally mounted emergency stop and provisions for a remote emergency stop from the end user.

EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
		<ul style="list-style-type: none"> d. The temperature loop set point can be adjusted locally at the control panel or remotely from the customer’s DCS by a 4-20mA signal. Each high temperature limit will provide a 4-20mA signal for retransmission of their process variable. The following hardwired control signals/connections will be available to the customer: <ul style="list-style-type: none"> i. Remote Temperature SP (4-20mA) ii. High Temperature Controller PV Retransmission (4-20mA) iii. Common BMS Alarm (Dry Contact) iv. Remote Emergency Stop (Dry Contact) v. Remote Start/Stop (Dry Contact) vi. Burner Interlocks as Required (Dry Contact) vii. Burner Running (Dry Contact) viii. Combustion Blower Start/Stop (Dry Contact) ix. Combustion Blower Run Feedback (Dry Contact) x. Fluid Pump Run Feedback as Required (Dry Contacts) e. The control system will have a factory acceptance test performed and documented prior to shipment. The complete control panel will be inspected and a UL/cUL labeled will be applied.
		<ul style="list-style-type: none"> C. 1 X 100% Primary loop skid with motors and valves <ul style="list-style-type: none"> a. A 1 x 100% capacity primary system pump will be provided. The pump will be completely assembled on the heater skid frame. A summary of the equipment supplied with the primary loop pump skid is as follows: <ul style="list-style-type: none"> i. 100% centrifugal thermal fluid pump & motor ii. air cooled mechanical seal iii. High temperature gate valve with butt weld connections for pump inlet isolation iv. High temperature gate valve with butt weld connections for pump outlet isolation and throttling v. Y-pattern strainer with butt weld connections and drain valve vi. Drain valve

EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
		<ul style="list-style-type: none"> b. Instalments & Controls <ul style="list-style-type: none"> i. <i>Heater Mounted</i> <ol style="list-style-type: none"> 1. thermocouples with thermowells for fluid temperature measurement 2. thermocouple for flue gas temperature measurement 3. flow orifice for differential pressure measurement 4. DP switch with low and low-low flow switches for low fluid flow interlock ii. <i>Loose Primary Loop Instruments</i> <ol style="list-style-type: none"> 1. liquid filled pressure gauge for heat outlet pressure indication 2. PSV for heater coil overpressure protection (per ASME Section VIII liquid relief) D. Expansion tank <ul style="list-style-type: none"> a. The tank will be designed and stamped per ASME Section VIII and CRN. Includes: <ul style="list-style-type: none"> i. horizontal expansion tank with saddles ii. float type low level switches for expansion tank low level detection iii. level gauge for expansion tank level indication. Gauge isolation valves will be provided E. Heater bypass piping with manual bypass valve <ul style="list-style-type: none"> a. A bypass line around the heater is required to bypass excess flow. A manual globe valve is to be provided. The position of this valve will be determined during commissioning to bypass the required amount of flow.



EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
1100		<p><u>CHILLER</u></p> <ul style="list-style-type: none"> A. Cabinet: <ul style="list-style-type: none"> a. Painted cabinet. b. Stainless steel pipe and tubing. B. Condenser: <ul style="list-style-type: none"> a. Air cooled. b. Water regulating valve included. C. Pump: <ul style="list-style-type: none"> a. Industrial heavy duty centrifugal type pump. b. Seal less magnetic drive, close-coupled drive. c. Discharge pressure gauge included. D. Cooling: <ul style="list-style-type: none"> a. Cooling provided via a low temperature scroll compressor. b. Electronic modulating hot gas bypass valve. c. Electronic modulating thermal expansion valve. d. Compressor suction regulator. E. Electrical: <ul style="list-style-type: none"> a. 600V/3 Phase/60 Hz. b. Suitable for non-rated area of installation. c. Through-the-door disconnect. d. Variable frequency drive on the thermal fluid pump for user settable delivery pressure. e. Includes pressure relief valve. f. PLC controls mounted behind a window. g. Graphic user interface for ease of use and control over <ul style="list-style-type: none"> i. Temperature ii. Temperature ramp rate iii. Temperature input (from jacket or vessel) iv. Single PID loop F. Included items: <ul style="list-style-type: none"> a. ANSI flange supply and return line connections. b. Temperature control within $\pm 1^{\circ}\text{C}$. c. Expansion tank.

EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
1200		<p><u>WET SCRUBBER</u></p> <p>A. 304SS gas-contact construction. Housing drain for condensation included.</p>
1300		<p><u>CONTROLS AND INSTRUMENTATION PACKAGE</u></p> <p>A. One (1) operator control panel with ControlLogix processor and 15” touch screen with NEMA 4X enclosure. Casing materials of construction to be 304 stainless steel.</p> <p>B. 100 Amp NEMA 12 motor controlpanel with VFD’s, motor starters, nitrogen heater control. 600V design (to be located in non-classified area).</p> <p>C. Design and Programming by Bepex.</p> <p>D. Two (2) seal purge kits with regulators / rotameters for Bepex Solidaire’s</p> <p>E. One (1) water rotameter.</p> <p>F. One (1) gas loop vent control valve.</p> <p>G. One (1) air flow transmitter.</p> <p>H. One (1) level transmitter (for feeder).</p> <p>I. Two (2) speed sensors (for Solidaire’s).</p> <p>J. One (1) gas loop pressure transmitter.</p> <p>K. One (1) differential pressure transmitter.</p> <p>L. One (1) nitrogen makeup rotameter.</p> <p>M. One (1) relief valve for Solidaire dryer.</p> <p>N. Fourteen (14) temperature RTD’s for temperature measurement throughout the system.</p> <p>O. One (1) oxygen analyzer.</p>



EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
1400		<p><u>SYSTEM ENGINEERING</u></p> <p>A. Project management.</p> <p>B. Process Flow Diagram (PFD).</p> <p>C. Simplified Piping and Instrumentation Diagram (P&ID). Includes recommended instrumentation, but does not include piping dimensions. Piping is in customer’s scope of supply.</p> <p>D. Instrumentation List.</p> <p>E. Three (3) hardcopy Installation and Operation Manuals (IOM) and one (1) electronic IOM on CD.</p>
1500		<p><u>START UP SUPPORT: WET AND DRY COMMISSIONING</u></p> <p>A. <u>Dry Commissioning</u></p> <ol style="list-style-type: none"> 1. One trip, one technician, three work days are allocated for dry commissioning. 2. The objective of this trip is to determine run-ready status for wet commissioning. 3. This includes identification and inspection of areas of concern with the mechanical set-up of the equipment. 4. The dry commissioning ought to take place after the equipment has been set-up but before insulation of the equipment has taken place. 5. Electrical control and I/O check of electrical equipment is not included in the checkout, however running of the mechanical equipment will be necessary. 6. Running of the equipment with and without heat to the vessels will be necessary.

EQUIPMENT SPECIFICATIONS

<u>Item No.</u>	<u>Qty.</u>	<u>Description</u>
		B. <u>Wet Commissioning</u>
		1. Up to two trips, one engineer, ten work days are allocated for wet commissioning.
		2. The objective of this trip is to determine the performance of the process while operating with material being fed to the system.
		3. This includes identification and inspection of areas of concern while running of the process.
		4. Guidance on process troubleshooting and supervision during startup will be provided.
		5. General maintenance and operation training will be provided during this time.
		C. <u>Electrical Startup and commissioning</u>
		1. Up to two trips, one engineer, ten work days are allocated for electrical startup.
		2. The objective of this trip is to verify system I/O and functionality.
		3. This includes identification of areas of concern while running of the equipment and utilities.
		4. General maintenance and operation training will be provided during this time.

STANDARD SURFACE FINISH SPECIFICATIONS

Unless otherwise specified herein in writing, the following specifications will apply to Bepex Scope of Supply:

(E-1) FABRICATION SPECIFICATIONS:

Carbon steel plates (if any) will be sand blasted to near white metal per NACE and SSPC specifications. Internal welds on carbon steel product contact surfaces will be ground to remove weld splatter/berries and sharp edges/comers/burrs.

Stainless steel sheets (if any) will be 2B mill finish. Stainless steel plates (if any) will be hot-rolled finish. Internal welds on stainless steel product contact surfaces will be ground to a cleanable finish using 40 - 60 grit wheel; natural ripple of weld may remain, but all weld splatter/berries and sharp edges/comers/burrs will be removed.

Annealing, pickling, passivating, or electropolishing operations subsequent to fabrication work are not included unless otherwise specified herein in writing.

(E-2) PAINTING SPECIFICATIONS:

Carbon steel surfaces will be painted with one (1) coat of "Safety Blue", or if food related, white paint (1.0 - 1.5 mils), or one (1) coat of alkyd primer (1.0 - 1.5 mils). The paint will consist of a two (2) part mix polyurethane.

Stainless steel surfaces will not be painted.

Non-Bepex proprietary equipment (purchased items) will be painted per the manufacturer's standard.

(E-3) BEPEX FINISH SPECIFICATIONS:

The following is a brief description of standard finishes:

BEPEX#100 Finish - Welds not ground except to remove berries, etc. Welds are good quality. Stainless usually not blasted. Mild steel is blasted and painted.

STANDARD SURFACE FINISH SPECIFICATIONS

- BEPEX#200 Finish - Non-Premium but sanitary (cleanable). Mill finish usually not improved upon. Uncleanable flaws repaired. Interior welds ground if necessary to make cleanable. Exterior welds not ground, but free of open seams, gaps and crevices. Skip welds on outside of non-food units. Finish usually used with edible food products. This finish may be applied to carbon steel also. (Blasted finish.)
- BEPEX#300 Finish - Premium, easily cleanable, sanitary finish. All contact surfaces (plate, sheet, castings) brought to blemish-free finish. Utilizes specially purchased steel for good finish. Welds are ground smooth with a 120 grit, but are not flush with the surrounding surfaces. Exterior welds free of seam, gaps, and crevices should be superior to #200 finish. (Blasted finish).