

RESOLUTION No. 55 OF 22 JUNE 2020

Changed the text in "Art. 12 of Resolution No. 40, May 4, 2020"

From this

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NCM	Description
8415.82.90	Example 018 - stationary units preconditioning air (PCA) used as support air systems conditioned aircraft, Category C, soil, ice-water flow required by at least 14m³ / h nominal air flow of 1 kg / s minimum temperature output -2 degrees Celsius, with two stages of filtration, the control panel screen with "touchscreen", with or without mobile and articulated system for distributing air.
9022.14.19	Example 025 - Mobile Devices for imaging by X-ray surgical procedures called surgical arches specific to fluoroscopic examinations, provided with arm "C" with electromagnetic brakes with manual orbital motions of the arc of at least + / -100 degrees, the minimum angle manual +/- 225 degrees and the minimum immersion depth of 73 cm rectangular collimator system with diaphragm and plug, pulsed fluoroscopy minimum rate 0,5f / s maximum 30f / s with a maximum current of 119 mA for standard output power of 12 kW or current maximum 250 mA of output power of 25 kW generator X-ray tube at least in the range of 40 to 125kV, digital sensor CMOS level (complementary metal oxide semiconductor) based on indirect conversion technology, rotating anode tube with double focus, manual override switch with spiral cable 3m, radiation pattern pedal release with 5 m or multifunctional pedal cable

To this

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NCM	Description
8415.82.90	Example 018 - stationary units preconditioning air (PCA) used as support air systems conditioned aircraft, Category C, soil, ice-water flow required by at least 14m³ / h nominal air flow of 1 kg / s minimum temperature output -2 degrees Celsius, with two stages of filtration, the control panel screen with "touchscreen", with or without mobile and articulated system for distributing air.

Revoked the following items according to the respective regulation

NCM	Nº EX	Description	Regulation
8460.31.00	158	Machine tools for producing and / or regrind rotary cutting tools of hard metal (HM), high speed steel (HSS) or polycrystalline diamond (PCD) with a maximum diameter of 400 mm by means of abrasive wheels and / or rotating electrode with linear precision 0,0001mm with 5 or more axes with numerical control (CNC), with courses x, Y and Z equal to or less than 650 x 350 x 720mm, with axis (C) of rotation table angular turning +/- 200 degrees and axis (a) of the main head with infinite degree, with or without automatic charging system and unloading tools and / or parts.	Resolution No. 51 of July 5, 2017, the Foreign Trade Chamber
8422.30.29	390	Machines for recravar aluminum lids for beverage cans with a capacity exceeding 1,000 cans / min for aluminum cans with a height ranging from 28 to 250mm; with motorized height adjustment system with digital display; diameter 50 to 73mm; with 8 or more seaming stations with seaming cam desacoplável; step chain comprised of 92 to 104,8mm; controlled by Programmable Logic Controller (PLC); with automatic lubrication oil, including tooling seaming.	Resolution No. 69 of August 21, 2017, the Foreign Trade Chamber
8429.51.99	26	Wheel loaders, articulated in bucket capacity between 1.6 and 1.7m³, static load and tipping 5.403kg 8.467kg operating weight, gross nominal power of 74kW, 4.4-liter engine of 2,220 cc and 2.350rpm.	Resolution No. 90 of December 13, 2017, the Foreign Trade Chamber
8451.80.00	73	Combinations of machines for drying and fixation of tissues by heat treatment, horizontally, and thermoplastic mesh fabrics, with automatic control, with working width of 3.400mm or less, consisting of: chamber heated by thermal oil or gas burners, each chamber with a length of 3 meters, can hold 6 or more fields provided with: internal fans that circulate hot air (zigzag); input feed rollers; coolers cylinders in tissue output; weft straightener and panel "touch screen".	Resolution No. 90 of December 13, 2017, the Foreign Trade Chamber

8443.39.10	254	high-speed printing machines, industrial type with jet piezoelectric ink drop on demand technology (drop on demand), for printing uncoated paper, inkjet treated, matte inkjet and paper coated silk, with weights between 52 and 160 g / m ² , fed by paper rolls with a width between 203 and 510mm, able to print in color or monochrome, double-sided, single-device or duplex with double device, printing speed up to 168m / min for color and 200m / min for monochrome variable resolution of 360 x 600 dpi to 1200 x 600dpi and high quality mode (VHQ "Very High quality") for monochrome printing, variable size ink droplet from 3 to 13 picoliters, drying by infrared (IR) using water-based ink, dye or pigment HD ("High Density").	Resolution No. 15 of February 28, 2018, the Foreign Trade Chamber
8439.99.90	28	Rules ceramics with angle control device and / or height composed of steel bar, shaft and devices, and steel for the perfect operation involved the synthetic fabric (bag type) and the command which can be manually operated by means of lever or automatically (electro motor), for use exclusively in the manufacturing process of pulp and paper.	Resolution No. 23 of March 27, 2018, the Foreign Trade Chamber
8483.40.10	148	Multiplying wind turbine spins 60Hz frequency power within 3.630kW, n1 input speed (1 / min) from 11.5 to 16.0 ISO VG 320 oil capacity between 440 and 600L oil net weight between 19,600 and 25.000kg.	Ordinance No. 220 of February 25, 2019, the Special Secretariat for Foreign Trade and International Affairs of the Ministry of Economy
8464.20.10	14	Machines for beveling glass and machine for bevelling (machining) edge, rectilinear type (straight) with working glass cold, has 9 zones with front desk with height adjustment for the production of small pieces (from 25 x 25mm) with minimum thickness of 3mm and a maximum of up to 19mm, with a minimum size equal to 25 x 25mm, with a speed of 0.6 to 6.0m / min at 6 bar operating pressure, with power supply 380Vac - 60Hz, with beveled angle of 3 to 45 degrees, allowing perform beveled with a maximum width of 40mm, with an automatic pneumatic drive of the felt wheels and programmable logic controller (PLC) with touch screen (touch screen) which displays thickness control glass, width and angle of the beveled, drag speed, meters and wear of wheels produced.	Ordinance No. 2024 of September 12, 2019, the Special Secretariat for Foreign Trade and International Affairs of the Ministry of Economy
8422.40.90	853	Machine combinations for automatic bags "pellets" pallet with a maximum output capacity of 400sacos / h composed of: 1 flattener device sacks, 1 palletizer modular construction for palletizing maximum weight bags 5 to 50 kg up to 16 layers, equipped with belt conveyors and rollers and bar rotating device pusher bags, deposit table, clamping device aligner and device back to cart lift, one empty pallet transport system provided with pusher pallet by double sliding plate and short rollers tab pallet magazine, and optical collision protection bar, one set of discharge roller conveyors, electrical control with programmable logic controller (PLC).	Resolution No 2 of 22 October 2019, the Executive Committee of Foreign Trade Chamber Management
8414.80.19	133	Centrifugal compressors for air, with paid-up gearbox, 4 stages, consisting lubrication system input filter, relief valve "blow-off", muffler, cooling system with heat exchangers shell-and-tube type, containing water in tubes and air in the hull, high speed bearings hydrodynamic type floating inserts "pad tilting" capacity control system "guide vane" labyrinth sealing system with three-dimensional impellers, single base (skid) for mounting pressure 10,4bar to operation (a) and air flow 40.000Nm ³ / h (1 bar (a) 0 degrees Celsius and 0% RH), the input conditions 0,907bar (a) atmospheric pressure in the filter inlet suction for suction temperatures ranging from -1 to 35 degrees Celsius with only a basis for assembly.	Resolution No. 14 of November 19, 2019, the Executive Committee of Foreign Trade Chamber Management
9022.14.19	25	mobile devices for imaging by X-ray surgical procedures called surgical arches specific to fluoroscopic examinations, provided with arm "c" with electromagnetic brakes with manual orbital motions of the arc of at least +/- 100 Degrees , minimum the manual +/- 225 degrees angle and depth of immersion of at least 73cm, rectangular collimator system with diaphragm and plug, pulsed fluoroscopy rate of at least 30f / s, at least 119mA current, generator X-rays at least in the range of 40 to 125kV, digital CMOS level (semiconductor complementary metal oxide) based on indirect conversion technology detector with a rotating anode tube of a double focus default output power 25kW and optional 12kW, Thumbwheel switch with spiral cable 3m, pedal release pattern for radiation with 5m cable and optional multifunctional pedal wired or wireless, control panels available on the touch sensitive chassis the arm "c" on the monitor of the car, and the optional remote control unit, integrated computer with input and output data units, stand with 19-inch monitors, and minimum in storage capacity of 300,000 images on the hard disk .	Resolution No. 14 of November 19, 2019, the Executive Committee of Foreign Trade Chamber Management

8504.40.90	22	Inverters for photovoltaic energy systems (solar), mono or two-phase connected to the network "on-grid", performing DC conversion into alternating current in the power range from 3,000 to 8.200W and management of energy delivered to the grid, working with tension maximum operating in 1.000Vcc DC and starting voltage of 80Vcc, equipped with: 2 followers of maximum power point (SPMP) controlling up to 2 "strings" input each, with the inverter scaling factor (overload) of 150% active cooling system (cooler by forced ventilation), IP65, "display" LCD operating temperature -25 to 55 degrees Celsius, current disconnecter integrated continuous, integrated Wi-Fi communication interface API and Modbus communication protocol (TCP or RTU), digital inputs and outputs (IOs) to configurable power management, rated output voltage in AC 220Vac, frequency of 50 / 60Hz, power factor adjustably (0.85 inductive or capacitive 1) in accordance with IEC 62109-1 / 2, IEC 62116, 16149 and NBR NBR 16150.	Resolution No. 30 of December 30, 2019, the Executive Committee for the Management of Chamber of Commerce Exterio
8421.39.90	96	Filters fully automatic galvanized steel panels with paint treatment compared to saline corrosion air cleaning sleeves 189 fitted with self-cleaning air long, continuous, controlled by a programmable logic controller (PLC) equipped with 44,5kW engine 1, with a total capacity 24.500m ³ air / h with a maximum emission of 15 mg / Nm ³ , with filter surface 312m ² with certified non-return valves with adjustable against explosion automatic cycle control with self cleaning control device with frequency device reversal of the air, blast door system compared with closed loop system powder expulsion, suction-assisted system against fire system with permanent perimeter barrier against deflagration, with rotary valve.	Resolution No. 11 of January 30, 2020, the Executive Committee of Foreign Trade Chamber Management
8426.99.00	6	freight cars with the possibility of loading from both sides without turning the load in its axis with 55t capacity, longitudinal movement of 9m and transverse 40m for loading and unloading the homogenization furnace and the cooling chamber, with sensors positioning, with its respective electrical panel and programmable logic control (PLC).	Resolution No. 14 of February 19, 2020, the Executive Committee of Foreign Trade Chamber Management
8414.80.90	21	Recompressores mechanical vapor MRV (mechanical vapor recompression) for evaporating units, multiple or single stages, driven by pressurized oil damped bearing with flows up 350.000Nkg / h until 5MW engine capacity, temperature rise up to 10 Kelvin in a single stage speed up to 320m / s, working pressures of 0.05 to 5bar containing water injection system sealing unit seals with floating labyrinth ring carbon equipped with security mounted control instruments on the sole basis for control of temperature, vibration level, flow and oil pressure and level of condensate in the housing without programmable logic controller.	Resolution No. 40 of May 4, 2020, the Executive Committee of Foreign Trade Chamber Management
8414.80.90	22	Recompressores mechanical vapor MRV (mechanical vapor Rcompression) for evaporating units with multiple or single stages flows up 350.000Nkg / h temperature rise up to 10 Kelvin in a single stage, provided with: damping system with hydrodynamic bearings, engines of up to 5 MW, operating at speeds up to 320m / 0.05 working pressures 5bar containing water injection system sealing unit seals with floating labyrinth ring carbon equipped with safety instrumentation for control of temperature, vibration level, flow and oil pressure and level of condensate in the housing without motor and without programmable logic controller (PLC).	Resolution No. 40 of May 4, 2020, the Executive Committee of Foreign Trade Chamber Management
8422.30.29	503	Bags multilayer plastic storage pig Animal semen with dimension 256 x 60mm (unitary) with bacteriostatic treatment with a protected tip (enveloped), presented in roll form for specific use in automatic packaging equipment for animal breeding laboratory.	Resolution No. 40 of May 4, 2020, the Executive Committee of Foreign Trade Chamber Management

8434.20.90	26	continuous butter making machines with production capacity of 1,500 kg / h, power of 40kW, designed to produce butter from cream, with 3 modules being built agitation section stainless steel with agitation unit thermal friction and multiflexo cylinder with double jacket for water circulation tube made of stainless steel with serum separation unit with self-purifying device and serum separating unit, vacuum section which is obtained by a vacuum pump or central vacuum system .	Resolution No. 40 of May 4, 2020, the Executive Committee of Foreign Trade Chamber Management
8477.10.21	63	hydraulic, plastic injection molding machines, hybrid, with maximum force 29.419kN mold clamping, the opening force 2.353kN mold closing speed of the mold least 2m / min and a maximum of 45m / min, the minimum opening speed of the mold 2 m / min and a maximum of 45m / min, size 2,550 x 2,500 plate (H x V), space between bars 2050 x 1900 (H x V), the maximum displacement of the fastener 3.200mm, and mold height mínimo1.000 maximum 1,900mm, hydraulic ejector force 490kN mold displacement 400mm, feed rate 4.7m / mim, retraction speed 7,7m / i, max mold size 2,500 x 1,650 (H1 x V1), 1.290 clamping tonnage x1.290 (h2xV2), weight 45t of the mold, injection volume 13.200cm3, injeção177MPA maximum pressure, injection speed 76 mm / s injection rate 1.350cm3 / s, power injeçã o239kW, screw diameter 150 mm, displacement of parafuso750mm screw speed 55rpm minimum and maximum 110rpm, 30mm away from the nozzle, the nozzle touch force 59kN, 440V power supply, 60Hz, with PLC and LCD "touchscreen" with USB.	Resolution No. 40 of May 4, 2020, the Executive Committee of Foreign Trade Chamber Management
8428.90.90	594	hydraulic, plastic injection molding machines, hybrids, with maximum force mold clamping 29.419Kn, molde2.353kn the opening force, the closing speed of the mold least 2m / min and a maximum of 45m / min, the minimum opening speed of the mold 2 m / min and a maximum of 45m / min, board size 2550 x 2500 (H x V), space between bars 2050 x 1900 (H x V), the maximum displacement of the fastener 3200mm, minimum mold height 1,000 and most 1,900 mm, hydraulic ejector mold under 490 kN displacement 400mm, feed rate 4.7m / mim, retraction speed 7,7m / i, max mold size 2,500 x 1,890 (H1X V1) and clamping tonnage 1.290 x 1.290 (h2 x V2), the mold weight 45 tons, injection volume 13.200cm3, injeção177MPA maximum pressure, injection speed 76 mm / sec, injection rate 1.350cm3 / s power 239kW injection screw diameter 150mm, displacement screw speed of 750 mm screw minimum and maximum 55rpm 110rpm, 30mm away from the nozzle, strength Touch the nozzle 59kN, 440V power supply, 60Hz, with PLC and touchscreen LCD display with USB.	Resolution No. 40 of May 4, 2020, the Executive Committee of Foreign Trade Chamber Management
8441.10.90	107	rotating horizontal automatic cutting machines for cutting fabricated self-adhesive labels in paper or polypropylene film, polyethylene and other materials, pre-printed or unprinted, with maximum speeds of up to 250m / min, for working rolls with a width of 150 to 510mm, provided with: motorized unwinding drive for coils with a diameter up to 1.000mm, with electric lift coils, tension control system, adjustable for amending the table of materials, liner system, inflatable shaft for coils with cores and coils 152mm passing the material being processed; 2 motorized drive units comprising vacuum roll and roll with rubbery surface,	Resolution No. 49 of May 19, 2020, the Executive Committee of Foreign Trade Chamber Management

8454.30.10	86	leak under pressure machines with up to 23T clamping force with hot chamber 18kg storage capacity of molten metal with 4 cross hydraulic movements, with computer control panel for mold 101.6 x 101 6mm.	Resolution No. 49 of May 19, 2020, the Executive Committee of Foreign Trade Chamber Management		
Included in the items according to the respective regulation					
NCM	Nº EX	Description	Regulation	Tax	Deadline
8460.31.00	185	Machine tools for producing and / or regrind rotary cutting tools of hard metal (HM), high speed steel (HSS) or polycrystalline diamond (PCD), with maximum diameter equal to or less than 400 mm by means of abrasive wheels and / or electrode rotary precision linear 0,0001mm with 5 or more axes with numerical control (CNC), with courses x, Y and Z equal to or less than 650 x 350 x 720mm, with axis (C) of the rotation table with turning angle of +/- 200 degrees and axis (a) of the main head with infinite degree, with or without load system and automatic unloading of tools and / or parts.	Resolution No. 51 of July 5, 2017, the Foreign Trade Chamber	0	31/12/2021
8422.30.29	511	Machines for recavar aluminum lids for beverage cans with a capacity exceeding 750latas / min for aluminum cans with height ranging from 28 to 250mm; with motorized height adjustment system with digital display; diameter 50 to 73mm; with 8 or more seaming stations with seaming cam desacoplável; step chain comprised of 92 to 104,8mm; controlled by Programmable Logic Controller (PLC); with automatic lubrication oil, including tooling seaming.	Resolution No. 69 of August 21, 2017, the Foreign Trade Chamber	0	31/12/2021
8443.39.10	349	high-speed printing machines, industrial type, with inkjet demand drop of piezoelectric technology (drop on demand), for printing coated papers or not, inkjet treated, matte inkjet and paper silk coated with weights between 52 and 160 g / m2, fed by paper rolls with a width of 203mm and 510mm, able to print in color or monochrome, duplex with single device or duplex with double device, print speed of up to 168 m / min for color and / or 200 m / min for monochrome variable resolution of 360 x 600 to 1200x 600 dpi and high quality mode (VHQ - "Very High quality") for monochrome printing or not, variable size ink droplet from 3 and 13 picoliters drying, infrared (IR) using water-based ink, dye or pigment HD ("High Density") or HF (high fusion).	Resolution No. 15 of February 28, 2018, the Foreign Trade Chamber	0	31/12/2021
8439.99.90	48	Rules ceramics with angle control device and / or height composed of steel bar, shaft and devices, and steel for the perfect operation involved the synthetic fabric (bag type) and the command which can be manually operated by means of lever or automatically (electro engine and / or electric), for use exclusively in the manufacturing process of pulp and paper.	Resolution No. 23 of March 27, 2018, the Foreign Trade Chamber	0	31/12/2021
8483.40.10	305	Multiplying wind turbine spins 60Hz frequency power within 3.811,5kW, n1 input speed (1 / min) from 11.5 to 16.0 ISO VG 320 oil capacity between 440 and 600L oil weight liquid between 19,600 and 25.000kg.	Ordinance No. 220 of February 25, 2019, the Special Secretariat for Foreign Trade and International Affairs of the Ministry of Economy	0	31/12/2021
8464.90.19	197	Machines for beveling glass and machine for bevelling (machining) edge, rectilinear type (straight) with working glass cold, has 9 zones with front desk with height adjustment for the production of small pieces (from 25 x 25mm) with minimum thickness of 3mm and a maximum of up to 19mm, with a minimum size equal to 25 x 25mm, with a speed of 0.6 to 6.0m / min at 6 bar operating pressure, with power supply 380Vac - 60Hz, with beveled angle of 3 to 45 degrees, allowing perform beveled with a maximum width of 40mm, with an automatic pneumatic drive of the felt wheels and programmable logic controller (PLC) with touch screen (touch screen) which displays thickness control glass, width and angle of the beveled, drag speed, meters and wear of wheels produced.	Ordinance No. 2024 of September 12, 2019, the Special Secretariat for Foreign Trade and International Affairs of the Ministry of Economy	0	31/12/2021
8422.40.90	902	Machine combinations for automatic palletizing bags "pellets", with a production capacity exceeding 400sacos / h composed of: 1 flattener device sacks, 1 palletizer modular construction for palletizing maximum weight of sacks 5 to 50kg with up to 16 layers, equipped with belt conveyors and rollers and bar rotating device pusher bags, deposit table, clamping device aligner and device back to cart lift, one empty pallet transport system provided with pusher pallet for double sliding plate and short rollers tab pallet magazine, and optical anti-collision protection bar, one set of discharge roller conveyors, electrical control with programmable logic controller (PLC).	Resolution No 2 of 22 October 2019, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021

8414.80.19	139	Centrifugal compressors for air, with paid-up gearbox, 4 stages, consisting lubrication system, with or without input filter, relief valve "blow-off", muffler, cooling system with heat exchangers shell-and-tube type, containing water in the pipes and the air in the hull, high speed bearings type hydrodynamic floating inserts "pad tilting" capacity control system "guide vane" labyrinth sealing system with three-dimensional impellers, single base (skid) for assembling, operating pressure to 10,4bar (a) and air flow 40.000Nm ³ / h (1 bar (a) 0 degrees Celsius and 0% RH), the input conditions 0,907bar (a) at atmospheric pressure suction filter inlet for suction temperatures ranging from -1 to 35 degrees Celsius with only a basis for assembly.	Resolution No. 14 of November 19, 2019, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021
9022.14.19	29	mobile devices for imaging by X-ray surgical procedures called surgical arches specific to fluoroscopic examinations, provided with arm "C" with electromagnetic brakes with manual orbital motions of the arc of at least +/- 100 Degrees , minimum angle in manual and +/- 225 degrees in the minimum immersion depth 73 cm, with a rectangular collimator system and docking diaphragm minimum rate pulsed fluoroscopy 0,5f / s maximum 30f / s, current maximum of 119 mA for standard output power of 12 kW and maximum current 250 mA of output power of 25 kW generator X-ray tube at least in the range of 40 to 125kV, CMOS level digital detector (oxide semiconductor complementary metal) based on indirect conversion technology, rotating anode tube with double focus, manual override switch with spiral cable 3 m pedal radiation pattern with release cable 5 m or multifunctional pedal with or without f io, touch sensitive control panels available on the arm of the chassis in "C" and monitor the car, and the unit's optional remote control, integrated computer with input and output data units, stand with 19-inch monitors, and storage capacity of up to 300,000 images on the hard drive may	Resolution No. 14 of November 19, 2019, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021
8504.40.90	74	Inverters for photovoltaic energy systems (solar), mono or two-phase connected to the network "on-grid", performing DC conversion into alternating current in the power range from 3,000 to 8.200W and management of energy delivered to the grid, working with tension maximum operating in 1.000Vcc DC and starting voltage of 80Vcc, equipped with: 2 followers of maximum power point (SPMP) controlling up to 2 "strings" input each, with the inverter scaling factor (overload) of 150% active cooling system (cooler by forced ventilation), IP65, "display" LCD operating temperature from -40 to 55 GrausCelsius, disconnecter current integrated continuous, integrated Wi-Fi communication interface API and Modbus communication protocol (TCP or RTU), digital inputs and outputs (IOs) to configurable power management, rated output voltage in AC 220Vac, frequency of 50 / 60Hz, d factor and adjustable power (0.85 to 1 capacitive or inductive) in accordance with IEC 62109-1 / 2, IEC 62116, 16149 and NBR NBR 16150.	Resolution No. 30 of December 30, 2019, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021
8421.39.90	109	Filters fully automatic galvanized steel panels with depintura treatment compared to saline corrosion air cleaning sleeves 189 fitted with self-cleaning air long, continuous, controlled by a programmable logic controller (PLC) equipped with 44,5kW engine 1, or 3 engines (engines and two 22kW motor 1.5kW 1), with a total capacity 24.500m ³ air / h with a maximum emission of 15 mg / Nm ³ , with filter surface 312m ² with non-return valves certified compared with explosion cycle automatic ajustáveldde self regulation with-cleansing control device, with air reversal frequency device, with doors system against explosion with sistemade powder expulsion from fechao circuit with vacuum assisted system consistema against fire, with permanent perimeter barrier before outbreak with rotary valve.	Resolution No. 11 of January 30, 2020, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021
8428.90.90	609	freight cars with the possibility of loading from both sides without turning the load in its axis with 55t capacity, longitudinal movement of 9m and transverse 40m for loading and unloading the homogenization furnace and the cooling chamber, with sensors positioning, with its respective electrical panel and programmable logic control (PLC).	Resolution No. 14 of February 19, 2020, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021

8414.80.90	23	Recompressores steam mechanical MVR (mechanical vapor recompression) for evaporating units, multiple or single stages, driven by pressurized oil damped bearing with flows up 350.000Nkg / h until 5MW engine capacity, temperature rise up to 10 Kelvin in a single stage speed up to 320m / s, working pressures of 0.05 to 5bar containing water injection system sealing unit seals with floating labyrinth ring carbon equipped with security mounted control instruments on the sole basis for control of temperature, vibration level, flow and oil pressure and level of condensate in the housing without programmable logic controller.	Resolution No. 40 of May 4, 2020, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021
8414.80.90	24	Recompressores mechanical vapor MVR (mechanical vapor recompression), evaporation units for multiple or single stages with flows of up 350.000Nkg / h temperature rise up to 10 Kelvin in a single stage, provided with: damping system with hydrodynamic bearings, engines of up to 5 MW, operating at speeds up to 320m / 0.05 working pressures 5bar containing water injection system sealing unit seals with floating labyrinth ring carbon equipped with safety instrumentation for control of temperature, vibration level, flow and oil pressure and level of condensate in the housing without motor and without programmable logic controller (PLC).	Resolution No. 40 of May 4, 2020, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021
8422.90.90	5	Bags multilayer plastic storage pig Animal semen with dimension 256 x 60mm (unitary) with bacteriostatic treatment with a protected tip (enveloped), presented in roll form for specific use in automatic packaging equipment for animal breeding laboratory.	Resolution No. 40 of May 4, 2020, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021
8434.20.90	27	continuous butter making machines with 1,500 production capacity up to 6.000kg / h, power from 40 to 94kW, designed to produce butter from cream, composed of three modules, with built agitation section stainless steel unit stirring thermal friction and multiflexo cylinder with double jacket for water circulation tube made of stainless steel with serum separation unit with self-purifying device and serum separating unit, vacuum section which is obtained by a vacuum pump or centralized vacuum system.	Resolution No. 40 of May 4, 2020, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021
8477.10.21	64	hydraulic, plastic injection molding machines, hybrid, with maximum force 29.419kN mold clamping, the opening force 2.353kN mold closing speed of the mold least 2m / min and a maximum of 45m / min, the minimum opening speed of the mold 2 m / min and a maximum of 45m / min, size 2,550 x 2,500 plate (H x V), space between bars 2050 x 1900 (H x V), the maximum displacement of the fastener 3.200mm, and mold height minimo1.000 maximum 1,900mm, hydraulic ejector force 490kN mold displacement 400mm, feed rate 4.7m / mim, retraction speed 7,7m / i, max mold size 2,500 x 1,890 (H1 x V1), 1.290 clamping tonnage x1.290 (H2xV2), weight 45t of the mold, injection volume 13.200cm ³ , injeção177MPa maximum pressure, injection speed 76 mm / s injection rate 1.350cm ³ / s, power injeçã o239kW, screw diameter 150 mm, displacement of 750mm screw speed of 55rpm screw minimum and maximum 110rpm, 30mm away from the nozzle, under bicyclic ring o59kN, 440V power supply, 60Hz, with PLC and LCD "touchscreen" with USB. (H2xV2), weight 45t mold, injection volume 13.200cm ³ , maximum pressure injeção177MPa, injection speed 76 mm / s rate injection 1.350cm ³ / s, power injeção239kW, screw diameter 150mm, 750mm	Resolution No. 40 of May 4, 2020, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021
8441.10.90	110	Cutting rotating horizontal automatic, cutting fabricated self-adhesive labels in paper or polypropylene film, polyethylene and other materials, pre - printed or unprinted, with maximum speeds of up to 250m / min, for working rolls with a width of 150 to 510mm, provided with: motorized unwinding drive for coils with a diameter up to 1.000mm, with electric lift coils, tension control system, adjustable for amending the table of materials, liner system, inflatable shaft for coils with cores and coils 152mm passing the material being processed; 2 motorized drive unit composed of devácuo and rolling roller with rubberized surface with tension control system of the processing equipment; horizontal motorized rotary cutting unit for use with cutting tools with circumferences between 12 and 30 inches with a tolerance of +/- 0.1 mm cutting speed and continues for 0.2 +/- acceleration and deceleration of the machine, with electronics cutting register control with motorized rewind system chips able to work with diameter up to 800mm; motorized rewind drive, bidirectional, for cops with up to 1.000mm diameter, a lift electric coils with a voltage control system domaterial rewind, inflatable shaft for tubes with	Resolution No. 49 of May 19, 2020, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021
8454.30.10	87	leak under pressure machines with up to 23T clamping force with hot runner storage capacity 181kg molten metal with 4 movements hydraulic pad with computer control panel for mold 101.6 x 101 6mm.	Resolution No. 49 of May 19, 2020, the Executive Committee of Foreign Trade Chamber Management	0	31/12/2021

Included in the "Resolution No. 14 of February 19, 2020"					
NCM	Nº EX	Description	Regulation	Tax	Deadline
7308.20.00	Ex 001	composite power transmission towers two modules, tubular ASTM A36 steel and ASTM A242 / A529 / A572 / A588 / A606 of 253,5m height, joined by flanges, with yield strengths of 235 to 345Mpa, with maximum stresses end 375 to 470Mpa, which support conductors pressures 121kgf / m² shielded wire pressures 124kgf / m² insulators pressures 233kgf / m², suspensions periods of winds 1.500m, 2.500m extension suspensions weights weights extensions with suspensions of 3.100me deflections wind null suspension.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8408.90.90	Ex 069	Stationary diesel engines, horizontal single-cylinder, 4-stroke, water-cooled, direct injection, with power equal to or greater than 4 HP, but equal to or less than 24HP rotation less than 1.800rpm but not exceeding 2.400rpm and cylinder capacity 0,382L or above but not exceeding 1,132L.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8408.90.90	Ex 070	diesel engines for use in stationary equipment, 4-stroke inline 6-cylinder, turbocharged and after-cooled, with direct fuel injection system can be controlled injection unit and electronic or mechanical sensors with power 154kW (" Standby " @ 60Hz) 1.800rpm in rotation, 7,15L volumetric displacement, compression ratio of 18: 1, emission maximum noise 106dB (a) (" Standby " @ 60Hz) with a tolerance of ± 0,75db (a) developed to meet the emission regulations Tier 2, EU Stage 2, TA-Luft and RoHS 2, fan compounds turbocharger, fuel prefilter closed breather system and flange exhaust, and may contain radiator front protection drain pump oil decomustivel remote filter, preheating equipment air preheat block equipment level sensor coolant, air cleaner, engine belts of protection and control panel kit connection, value Unita River (CIF) not exceeding R \$ 23,436.87.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8412.21.10	Ex 071	Hydraulic cylinders double or single acting spring return, rectilinear motion, steel body, or threaded block, 4 total stroke of 200mm and a maximum pressure of 120 to 500bar; used in fastening devices on machining centers.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8412.31.10	Ex 072	active contact flanges to exert pressure adjusted in automation systems with a maximum force of up to 800N.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8413.19.00	Ex 009	adhesive application equipment bicomponent columns for stoves and door control panel with control of adhesive flow and high precision regarding tolerance (mixture of precision) from 1.5% to suit different sizes of cords thickness 3mm injector and capable of 18 to 42cm in length applications seamlessly with 10s / application cycle.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8413.70.10	Ex 039	Motobombas centrifugal permanent magnet brushless electric motor, suction and discharge nozzle 2 inch BSP threaded type for powers of 500 to 900W and suction and discharge nozzle 3 inch BSP threaded type for power 1.200W , AC current continues with maximum flow of 27m³ / h, head up to 19mca, used for pool water circulation, together with its drive (driver to aid in pump operation).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8413.70.80	Ex 020	5HP operating pumps with capacity to gradient coils with flow 31L / min at 5.7bar [8.2gpm or the 82.8psi] and power electronics cabinet 94.6L / min at 5.5bar [25gpm or the 80psi], or contain, alternatively or cumulatively, "chip" configuration and removal tool.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8413.81.00	Ex 060	Motobombas multistage centrifugal electric motor of permanent magnet brushless for submerged operation, spout, brass and incorporated check valve, measuring 1 inch BSP type axle and pumping body stainless steel, impeller and diffuser technopolymer, from 8 to 17 stages, coupled with permanent magnet motor oil cooled and lubricated, power of 270 to 750W, three-phase current continues to flow 4,2m³ maximum / h head up to 98mca, used for drinking water supply in deep wells with a 3 inch diameter, together with its drive (Controller to aid in pump operation).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8413.81.00	Ex 061	Motobombas peripheral permanent magnet brushless electric motor, suction and discharge nipple 1 inch BSP threaded type, wattage of 270 to 540W, three-phase current continues to flow 2,5m³ maximum / h head up to 51mca , used for drinking water circulation, accompanied by your drive (controller to aid in the operation of the pump).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8413.91.90	Ex 048	Telemetry modules for measuring the submerged discharge pressure centrifugal pumps made of 4140 steel alloy, 9Cr-1Mo 410-13Cr or with or without flange engaging the pump discharge with gantry for pressure transmission line lengths from 0.19 to 0,55m external diameter between 3.37 to 11.26 inches and up to 50kg.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8414.30.99	Ex 010	Screw compressors for refrigerants for compression-type HCFCs, HC, HFC with water displacement equal to or greater than 400m ³ / h 60Hz, 70Hz can operate even with use of the frequency inverter, the maximum permissible pressure of up to 30bar in the discharge and 20,5bar suction for application in low and medium temperature refrigeration systems.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8414.59.90	Ex 038	cooling units used for cooling telecommunication and data processing equipment, having up to 16 microventiladores with higher capacity air flow 84,5CFM, less than 21dBA noise, and availability of the higher static pressure 19mmH ₂ O, single body provided with It may contain cables, seals, connectors, plastic substrate, metal pipe for refrigerant fluid, a metal grid for protection and support for fastening available refrigeration systems with air, water, air or water, commercially referred to as "coolers".	Resolution No. 14 of February 19, 2020	0	31/12/2021
8414.80.39	Ex 005	High pressure helium compressors for "Cold Head" with chilled water inlet 7 to 10L / min and 4 to 28 degrees Celsius and pressurized static gas helium range 1.90 to 2,20MPa (high) and 0.40 to 0,60MPa (low) composed of capsule compressor refrigeration system, ignition system and separating the oil and filters.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8417.80.10	Ex 003	Furnaces tunnel model to natural gas for the ceramics industry, used in the production of sanitary ware, the bifunctional type, suitable for single firing with cycles of 14h and late blight with cycles of 16h 45m with measures long x 1.5m wide x 0, 75m high, with exchange of simple burning mode through "software", without oven stop with operation of the burners in 2 modes, "pulse firing" or excess air, individualized for each control group, with insulation main the burning zone with ceramic fiber, providing intermittent or continuous operation, with a furnace operating temperature 1.220 Degrees Celsius and a maximum temperature of 1,300 degrees Celsius, equipped with logic controller (PLC), fan controlled by a frequency inverter and high engine yield IE3 class, 220V voltage, installed electric power 70kVA installed thermal power 1.400kW.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8417.90.00	Ex 076	steel tubes coated carbon fiber batt and graphite vacuum furnace for heat treatment of precision rotating tools, consisting of graphite components, power conductors, resistance heater and "nozzles" gas.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8418.69.99	Ex 065	cryogenic cooler "Cold Head" 2-stage cryo-refrigeration cycle circuit with continuous closed by high pressure helium gas for use in magnet MRI, with a range of 25 to 45K for the first refrigeration cycle and range from 3 to 4.2K for the second refrigeration cycle, comprising a drive unit, and piston-cylinder assembly condenser, compressor compatible with, and may contain, alternatively or cumulatively "kit" consists of installation gasket, sealing ring, washer and bolt .	Resolution No. 14 of February 19, 2020	0	31/12/2021
8419.39.00	Ex 148	Fast drying cabinets instruments, equipment, external structure of stainless steel AISI 304, thermal isolation chamber 50mm thick drying chamber in stainless steel AISI 304 polished with connections that allow forced drying anesthetics instruments, air flow circulation filtered by HEPA H14 with tempered glass double door reversible and configurable HST for opening to the right or the left with a key lock, door open sensors, digital controls with an LED display control panel, drying circuit served by two fans, air drying heating elements 1.500W are 36 connections to anesthesia trachea removable cassettes 6 x 6 and 8 shelves to accommodate 8 DIN baskets with the possibility of up to eight connectors cannulated instruments, the possibility for thermal printer and indirect treatment by UV lamp.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8419.40.20	Ex 006	Systems vacuum lamination oil grinding with a capacity of 200L / hr, standard distillation temperature of the oil up to 160 degrees Celsius, consisting of distillation tower, filtering, circulating pumps, condensers, electric heater, the tank and pump vacuum 1½ inch inlet connection 1 inch output connection, electric panel and 440VAC power supply.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8419.50.22	Ex 002	tubular heat exchangers, made of graphite, capable of performing heat exchange between fluids with heat exchange area of maximum 1.153,4m ² mainly provided with: 979% 100 tubes made of graphite impregnated with phenolic resin reinforced with fiber carbon radial thermal conductivity 60 to 70W / (mK); hull made of stainless steel and carbon steel, with a maximum internal diameter of 80.47 inches; protective gloves against wear, made of ceramic; mirrors made of graphite impregnated with phenolic resin.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8419.60.00	Ex 002	Automatic equipment for helium gas liquefaction capacity of 60L / day via closed cryogenic refrigeration circuit, provided with three units compressor screw, three pairs of pressurized hoses of low and high pressure 100 and 300psi respectively, and 3 " Cryocoolers "(head cold), with the refrigerant gas gaseous helium, control panel with PLC and touch control cabinet and general control screen.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8419.81.90	Ex 103	Electronic coffee machine with volumetric dosing, totally made programming on your dashboard, manual switch for semiautomatic distribution, available in versions 1 to 3 groups, structure made of stainless steel and painted steel, light signal of the boiler water level gauge for scale to display the pressure of the boiler and pump, automatic water inlet, 4 coffee programs divided by individual buttons, hot water supply system, 2 steam wands (2 and 3 groups), built-in pump, spray lance, heater cups (groups 2 and 3), LED lighting in working up, 220V single phase voltage, power 2.900W group 1, group 2 and 3 3.700W 5.300W groups steam boiler capacity 5L group 1, group 2 10,5L and 3 groups 17L, WxDxH (mm) 1 group (530 x 555 x 515), second groups (740 x 555 x 515) and 3 groups (980 x 555 x 515).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8419.81.90	Ex 104	Fryers with natural gas or LPG for frozen or refrigerated foods, for commercial and industrial purposes, stainless steel manufactured with casters heavy-duty front brake and equipped with 3-6 tanks with a maximum capacity of 50 kg of food per vat, with maximum power cooking in the range of 195,000 to 390.000BTU / h immersion in oil frying process with a capacity of 36L, equipped with oil filtration system through carton filter, which increases the quality of food and prolongs the life of the oil; control system through computerized panel with programming the cooking operation individualized per vat.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8419.81.90	Ex 105	automatic furnaces for steam cooking fish, flash-Vac process (exudation set to 100% yield), equipped with cylindrical body in stainless steel AISI-304, measuring 1,900mm 1.912mm inner diameter and outer diameter of approximately 5.540mm in length with load up to 4 baskets AISI 304 stainless steel, measuring 950 x 845 x 896mm containing up to 7.000kg of fish, with an approximate cycle time 1: 50h, maximum temperature of up to 140 degrees Celsius, containing secondary system hydraulic energy lifting platform for loading and unloading, electric pneumatic frame with programmable logic controller (PLC).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8419.89.99	Ex 282	Bioreactor with a volume of 50L for the production of biological medicines of high complexity, for biotechnology processes recombinant animal cell culture, controller "software" embedded, two 50L tanks, weighing system, two peristaltic pumps, flow regulators, sensors pressure, pH and dissolved oxygen sensors, temperature sensors, stirring system, heating systems and panel "touchscreen."	Resolution No. 14 of February 19, 2020	0	31/12/2021
8419.89.99	Ex 283	Bioreactors with a volume of 500L, for the manufacture of biological products of high complexity, for biotechnological processes of recombinant animal cell culture, 2 controller with "software" embedded, tank 500L, 4 weighing system, four peristaltic pumps, flow regulators, pressure sensors, pH and dissolved oxygen sensors, pressure sensors, temperature sensors, agitation systems consisting of 2 stirred engines being one upper and one lower heating panel systems and "touchscreen".	Resolution No. 14 of February 19, 2020	0	31/12/2021
8419.89.99	Ex 284	Bioreactors for the production of biological products of high complexity, for biotechnological processes of recombinant animal cell culture: with one or more controllers with "software" embedded with one or more 500L tanks with one or more weighing system, peristaltic pumps, flow regulators, pressure sensors, pH and dissolved oxygen sensors, temperature sensors, systems with stirring second stirring tank engines being one upper and one lower heating panel systems and "touchscreen".	Resolution No. 14 of February 19, 2020	0	31/12/2021

8419.89.99	Ex 285	Modular and semi-continuous devices for treating food meat (mortadella, sausage, sausage, bacon, ham, etc.), by means of simultaneous operation in a heating section (baking, hot air to finish baking, roasting, smoking, drying and bath) and cooling (bath by shower water, cooling by air circulation, cooling fresh air / exhaust air, cooling with ice water, fogging and pasteurization) heated by low pressure steam and / or steam high pressure with a maximum temperature of 120 degrees Celsius, or electric heating, oil or gas with a maximum temperature of 160 degrees Celsius, cooling to a maximum temperature of -3 degrees Celsius, and may be single door provided with "single-row" for the treatment of 4 to 12 stands, or double door "double-row" for treatment of 6 to 20 cars, with air-flow system with 1 ventilador for each basket or engines with two fans frequency converter, intermediate transfer section for separation of areas of low risk and high risk equipment and system for internal cleaning of the equipment, type CIP "Cleaning in place" and may contain operating control panel, the HMI type (Human Interface -Machine) with screen	Resolution No. 14 of February 19, 2020	0	31/12/2021
8420.10.10	Ex 013	Stations for metallic effects applications - metallized papers "foil" in laser printed papers through the process of "hot stamping" digital; 6 operating temperature settings, and cylindrical rollers 4 have to dual engine rotation direction (forward and backward) for applying 33.02cm maximum width, minimum heating time of 1 minute, a maximum heating time of 2 minutes and 30 seconds, automatic shutdown for 90s, lower motor noise of 60dB, working voltage of 110V and / or 220V power 1.100W, 60Hz frequency, maximum temperature 160 ° C is approximate dimensions of 49,5cm (L) x 14,5cm (O) X 6 , 5cm (A).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8421.21.00	Ex 174	hollow fiber membrane modules immersed in scheme intended for water and wastewater treatment plants, made of polyvinylidene fluoride (PVDF) with substrate material of acrylonitrile butadiene styrene (ABS) resistant to 300.000ppm / h of exposure to chloro, nominal inside diameter of 0.9 mm and a nominal fiber diameter of 2.2 mm external fiber nominal pore size of 0.1 micron; effective filtration area of from 10 to 20 m; permeate flux (flow rate) of between 12.5 and 35LMH, filtration with flow from the outside inward, working range transmembrane pressure (TMP) of 0.05 to 0.4 bar.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8421.21.00	Ex 175	aeration modules, provided with: 155 units (grids) with 12m long, metallic structural part for mounting the diffuser tube composed of 3,492 units totaling 2200 mm wide end (membrane tubular structure +); with silicone membranes manufactured with high temperature resistance (up to 120 Degrees Celsius) and abrasion perforated throughout their ease with smaller holes 1.4mm in diameter occurs allowing formation of fine air bubbles by air insufflation into the aeration modules; polypropylene manufactured tubular structure for mounting and packaging of the membranes in the structural part; 1 cross bar for lifting (removing); Lifting system (T-Transverse) of aeration modules.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8421.21.00	Ex 176	pressurized ultrafiltration membranes for removal of particulates, bacteria and viruses, with hollow fiber polyethersulfone (PES), 7-hole technology, the internal nominal diameter of 3.6 mm fiber with filtering area of 85m ² sense flow filtration from inside to outside (inside-out), maximum pressure 5bar (72,5psi), operating at a transmembrane pressure (TMP) of less than 1 bar (14,5psi) and maximum (TMP) 2,5bar (36psi) outer diameter 10 inch pot, six inch bond connection backwash maximum flow 250L / m ² / h.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8421.21.00	Ex 177	Ozone generators used as disinfectants and oxidants in water and wastewater in general, 2.900mm in width, depth 1,100 to 1,400 mm, maximum 2.000 to 2.080mm cabinet height and without water weight of 1,950 to 3.200kg, rated voltage supply system 380 to 480VAC, equipped with one or more dielectric modules advanced technology of ceramic, shock-resistant, with optimized properties for ozone generation in the range of 0 to 13% by weight and varied ozone production in the range 3.41 to 20,53kgO ₃ / h at a concentration of 8 wt%.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8421.99.99	Ex 073	Ex 073 - filter cartridges aviation absorptive elements, cylindrical cartridge format; external diameter: 44,5mm; inner diameter: 22,2mm; Length: 782,6mm; The closed end; B open end with O-ring "O-ring" Buna; ends made of "Nylon"; filter medium manufactured in micro fiberglass, coated water absorbing polymeric material molded on galvanized metallic core pipe.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8421.99.99	Ex 074	Cartridges coalescer filter element aviation - retention of solid ultrafine particles; promotes the coalescence of water in the fuel, allowing their separation in the second stage of filtration, cylindrical cartridge format; external diameter: 152,4mm; internal diameter: 88,9mm; Length: varies from 285.7 to 1.447,8mm - depending on the model; The closed end with fixing screw; B open end with O-ring "O-ring" Buna tip or threaded for engagement; ends made of "Nylon"; A multilayer filter medium made of glass micro fiber, cellulose and pleated coated textile material molded on galvanized metallic core pipe.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8421.99.99	Ex 075	Membrane ultrafiltration polyethersulfone (PES) designed for protein rejection 5,000 to 10,000 Daltons, with spacers 0,076, 0,117 and 0,165cm with membrane 50 360ft ² area (33m ² 4.6), with a length of 90, 2 and 96,5cm diameter and 9.6 cm (3.78 ") 10.9cm (4.28") 16,2cm (6.38 ") and 20,1cm (8"), spiral type configuration sanitary to work at maximum pressures up to 10 bar and temperature lower than 55 degrees Celsius.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8421.99.99	Ex 076	Module ultrafiltration hollow fiber membranes with vertical orientation fibers made of polyvinylidene fluoride (PDVF) with high permeability instantaneous tolerance to chlorine 5.000ppm with nominal pore size from 0,04microns to work in pressurized conditions or submerged elements with the module area from 15m ² for the treatment of water and wastewater with a flow from outside to inside, working with a maximum transmembrane pressure range of less than 2 bar.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8421.99.99	Ex 077	Systems for pressurized ultrafiltration membranes connection 40, 60 or 80 inches, modularly expandable combining the feed lines, air filter to work with pressures up to 4 bar and comprising heads of thermoplastic material, stainless clamps, gaskets of EPDM and base for stainless installation.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8421.99.99	Ex 078	Accommodation for depth filter modules developed production process of biological medicine highly complex, built in stainless steel, and the contact surfaces with stainless steel product AISI 316L, contact surfaces other than stainless steel product AISI 304 / 304l, internal adapter assembly in AISI 316L stainless steel, with the ability to withstand temperatures between -10 and 150 degrees Celsius, with a pressure between 14.5 and 150psig class.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.20.00	Ex 027	Enxaguadores with water and / or ionized air for can cleaning (aluminum, steel or plastic) and can operate with bottles of up to 66mm in diameter and up to 188mm height and volume to 1L, where retention of the cans is achieved by the system through perforated vacuum belt regardless of any guides, installed power of up to 25kW with a production capacity of up 90.000vasilhames / h.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.20.00	Ex 028	Washing termodesinfectoras and high-level desinfectoras, automatic with capability for reprocessing endoscopes 1 to 3 and even 2 video bronchoscopes or 3/4 fiber bronchoscopes, 1 or 2 ports barrier system, water consumption: (6L) for filling the chamber, sound level: less than 40dB 56,2dB default setting, drying with forced air system, the washing chamber built in AISI 316L steel and high visibility door with double tempered glass HST outside built in 304, door locking system during the cycle execution, two hydraulic circuits separated with dedicated pumps for endoscopic channels and washing chamber 2 arms of rotary sprinkler, the water line connection available to cold water / mixed or demineralized pump 110W, flow of 90L / min endoscope channel and 110W washing pump, flow of 90L / min to wash the washing arms dacâmara, three membrane pumps to add the chemicals BALANCE acids, storage capacity of chemicals to 3 gallons of 5L, electric heating element 2,6kW, two independent temperature probes PT1000, 3 switchboards: master, slave and redundancy, with the possibility of memorizing programs to 7: 3 standard programs, 4 user-defined auto-thermal disinfection cycles at	Resolution No. 14 of February 19, 2020	0	31/12/2021

8422.30.29	Ex 507	Combinations of machines for preforms and covers food, blow, bottle, closing, labeling, grouping and packaging containers PET (polyethylene terephthalate) with sensitive beverages, consisting of: preform feeder machine and lids; blower; with or without high pressure compressor; with or without preforms inspector; with or without rinser preform; Aseptic filling machines with higher rated capacity equal to or 12.000recipientes / h (1L containers), containers decontamination system (preform) and covers after heating by steam injection and activation of H2O2 / hot air drying cabinet filling with sterile environment, continuous filling control system, encapsulation system (cap application) of aseptically packaged containers, inspection system and disposal of non-conforming vessels (and / or collect samples for quality inspection in the laboratory) comessa collecting, SIP-CIP system for sterilization self-cleaning, surface cleaning SOP system COP and sanitizing; nitrogen with or without application station; After drying the containers is performed through the application of labels of the label application system with automatic speed adaptation system according to the inflow of containers; with	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.30.29	Ex 508	Machines with 24 channels with dual head disposed filled into 2 continuously trays vibrating, with 12 channels each, and divided into three steps aligned with a feed hopper and a filling nozzle in the discharge per tray for counting and filling circular, oblong tablets and capsules of drugs with a capacity to count up and potting 12.000comprimidos / min based on the diameter of 8mm and uncoated tablets and depending on size of vial and feed rate, able to work with vials having a diameter of 30 to 100mm and height 40 to 200mm, counting the tablets or potted capsule with 100% precision by infrared sensor with light time setting / dark for detecting double or broken tablets with verifying opening / shutter closing of tablets and / or capsules , provided with automatic insertion station desachês silica gel desiccant in bottles and containers for sachets width maximum of 50mm and a maximum length of 100mm, with maximum capacity 120frascos / min until 5sachês / bottle fed from rolls and detected by electronic sensing optical fiber as they are marked, cut by alternating action of the knife and insert in automatically bottles by piston action, capable of detecting	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.30.29	Ex 509	Automatic concept of rotary machines counterclockwise for filling and closing colognes and perfumes in glass bottles positioned on "pucks" with up production capacity 40frascos / min through set of dedicated and optimized parts 17 kinds of formats bottles / valve covers, with blowing system and suction particles provided with 4 nozzles with two pistons 250ml, two pistons 60ml and one piston 20ml volumetric filling, automatic product placement, sensor level control and product presence valve automatic application gearbox and ball, control station and presence components, apply stopper, pre-recrave, recrave, pre-tapping, automatic application collar or cap batocada or threaded with rejection system and air extraction with alcohol level detection, automatic pressing system module caps with "depucker", PLC - programmable logic controller functions and for diagnosis.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.30.29	Ex 510	Machines for stacking and boxing ceramic tiles, able to operate with equal dimensions coatings or less than 1,200 x 1,800 mm, with adaptation of the format select / separate automatic or not, provided with four or more trucks / extraction points, gifted or no automatic quality control unit or not automatic.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.40.90	Ex 892	Combinations of automatic and servo motor for forming, filling, sealing and encartuchar cartouches medication blister plastic / aluminum and / or aluminum / aluminum, for tablets and / or capsules of drugs, consisting of: emblistadeira machine for forming, filling and seal cartouches with a maximum equal to 720cartelas / min, fitted or not with a tooling set to a product format capacity, widths ranging cartouches between 30 and 86mm, lengths of cartouches of between 70 and 140, gate dual coils, reels with a maximum diameter of 600 mm, with or without system for bobbin exchange without machine stop, continuous feed movement, constructed so as not to allow the impurities lodging in the alveoli and production area (heating plates in a vertical position and construction of balconies), anti-stretch system forming material with 3 parts of	Resolution No. 14 of February 19, 2020	0	31/12/2021

8422.40.90	Ex 893	Automatic for the formation of lots in trays machines (blister) for the accommodation of turbines for use in automotive fuel pumps, consisting of: 1 component of the transfer belt system; exhaust system by pneumatic servomotor with manipulators; pneumatic claws; locking system of blisters of the rotor; parts transfer system for treadmill equipped with finished product identification sensors; Pneumatic valve block 1; One main control panel with three phase power supply and pneumatic 6A current, power, 3kW.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.40.90	Ex 894	Automatic packaging machines microwave popcorn packet type "paperbag" for controlled dosage corn and dosing precision oil, suitable for separating, crease, fold and seal 55 to 100g packages with dimensions of 287mm (C) x 139mm (L), with operations and double tracks with a maximum capacity of 150pacotes / min, equipped with dual station corn dosing packages opening device for suction and dispensing volumetric with sliding filling ports driven by the servomotor, dual sealing station by heat and pressure with 1/8 inch sealing bars, pumps for dosing of high precision oil with low standard deviation at dosages of 10 to 20g ½ inch dosing nozzles dosage safety device corn in packages "in the bag fill-in" double loading station, rotary magazine with storage capacity 3.000pacotes, system	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.40.90	Ex 895	Machines for wrapping paper rolls with diameter between 500 and width between 1.520mm and 2.540mm and 450 with a maximum capacity of 50bobinas / h, equipped with lateral locking discs, about panel and electrical protection and control.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.40.90	Ex 896	sequential operation of machinery for applying tax stamps 17 x 43mm in cigarette portfolios filters, placing the seals in different positions of cigarettes portfolios camera to check the positioning of the seals (kappa-Camera), afixador seals with nozzle "hot melt" with capacity for 400carteiras / min three-phase voltage of 380V, compressed air consumption 0,5m³ / h, installed power and 0,15kVA 60Hz mains frequency.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.40.90	Ex 899	Machines for application of the tax stamp on cigarettes cards, wrapping them with polypropylene film, application of narrow ribbon and packaging in sachets packages with 10 units with a capacity of 500carteiras / min, load connected to compressed air of 6 bar, air consumption tablet 100Nm³ / h main frequency of 60Hz.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.40.90	Ex 900	Combinations of automatic machines for manufacturing plastic containers used as packages of food products, composed of: double unwinder for films with a maximum width of 830mm, maximum diameter of daisies equal to 1.200mm, with pneumatic lifting device and control of the end coils film; thermoforming with maximum rated forming area of 750 x 380mm, minimum rating forming area of 480 x 80mm, pre-heating station, heating station, forming and cutting station, maximum operating speed 45ciclos / min, control system temperature by liquid tooling cavities 14 for producing containers with a volume of 347ml; Stacker already thermoformed containers forming stacks with a maximum length of 800mm, maximum operating speed greater than or equal to 47ciclos / min (variable depending on the characteristics and dimensions of	Resolution No. 14 of February 19, 2020	0	31/12/2021
8422.40.90	Ex 901	Machines for cotton lint pressing into bales with a maximum capacity of 80fardos / h, "Tramper & pusher" High Speed compound 03 bomb 1,200 gallons each connected power with power 800HP, 3 circulating pumps for oil cooling , autonomous air over oil cooler for each unit pumps and control console with programmable logic controller.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8423.30.19	Ex 009	Equipment for weighing and dosing fresh or frozen products, made of stainless steel contains 10 to 14 heads, waterproof and constructed with IP69K rating load cell in an aluminum block with a maximum capacity of 8kg per discharge depending on the configuration.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8424.30.90	Ex 091	Machines for deburring with high pressure water component of the "turbine", made of plastic, suitable for fuel pump motor vehicles; composed of: system components for the transfer on the mat, with high-pressure water pump; electrical panel with AC power and pneumatics.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8424.82.21	Ex 004	plastic impact sprinklers type Super diffuser (SD) models with 1 or 2 nozzles and not offset, with female or male threads in the dimensions of 1/2, 3/4 inch or 1; full circle (360 degrees) or partial circle with multiple grooves bulkhead nozzles fixed to the rocker arm (Super diffuser (SD)) for a jet of water to intercept better uniformity of distribution of water with operating pressure from 1, 5 to 5bar and wet diameter between 14 and 34m, specific for sub-irrigation cup with super low jet angle (4 degrees) and low (12 degrees).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8424.82.29	Ex 005	Pump spray for agriculture or horticulture for projecting, dispersing or spraying fluid irrigation flow rate 25 or 45L / min and pressure of 45kgf / cm ² to handle adjustment and pressure control, has cast iron cylinder head with surface treatment chemical resistance, allowing the dispersion to both clean water and for highly corrosive agricultural products, suction inlet filter and return hose, incorporated efficiency technology, requires electric motors 3CV for its operation.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8424.89.90	Ex 374	Machines for the application of films and aqueous solvents in pharmaceutical tablets, with a programmable logic controller, control computer and "software" shipped to development processes, with a storage capacity of up to 999 recipes with fully perforated drum of diameter 1.570mm, gross volume 500L and optimized geometry that allows processing of 10 (50L) to 100% (500L) volume without changing the drum, the automatic control system, the laser positioning of the spray guns, air volume capacity of up to 6.000m ³ / h with M-13 type filter, and moisture control for condensation, provided with automatic cleaning system "clean in place" (CIP).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8424.90.90	Ex 058	plastic shells with plastic cover used in paint guns to the control function, preventing the exit of fluids, and at the same time has the function of filtering impurities present in liquids, ranging in size in microns of 90 to 280 and Volume 350 to 900ml.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8425.41.00	Ex 004	Lift electro-hydraulic automotive, steel, manual unlocking bilateral lifting capacity of up to 4.000kg, maximum elevation up to 1.910mm and a minimum elevation up to 100mm, the distance between columns 2.890mm, 3.365mm external width, rise time less than 55s greater descent time 45s with hydraulic pump, single phase 220V.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8426.12.00	Ex 006	Self-propelled gantry on tires driven by diesel engine, for placement in dry, transport and back to the water craft 110t maximum load and maximum width (mouth) of 7.5 m, with four lifting points being hydraulically adjustable furniture 2 and two fixed, polyester straps 8 13m and 4 independent and synchronized electric winches, with wireless radio frequency remote control unit value (CIF) not exceeding US \$ 1,430,380.00.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8426.41.90	Ex 123	Self-propelled hydraulic manipulators on solid or inflated tire with two axles and traction on all wheels, superior operational 68.800kg weight, material handling, endowed upper car equipped with auxiliary generator, electric central panel, "joystick", connections 12V / 24V, energy recovery system with hydraulic cylinder and pressure accumulator; It may be mounted on steel structure with a height of 1,500 mm; stabilizers driven by electric motor with power equal to or greater than 200 kW, but not exceeding 250 kW; Hydraulic lift cabin; Articulated work front attachment (boom and stick) with a maximum range 15.120mm (ground level), and may contain as hydraulic work tools, magnetic platters claw "Clamshell" (shell), demolition jaw, electromagnet, hydraulic shears .	Resolution No. 14 of February 19, 2020	0	31/12/2021
8426.49.90	Ex 080	hydraulic self-propelled crawler handlers, operating weight of 220T, material handling, provided with upper carriage mounted on the tubular steel frame 10.000mm height, with central electrical panel, joystick, 12V / 24V connections; hydraulic system with hydraulic pumps with power reserve; Electric motor with power equal to or greater than 235kW, but equal to or less than 280kW; Articulated work front attachment (boom and stick) with a maximum range 26.714mm (ground level), and may contain as hydraulic work tools, magnetic platters claw "Clamshell" (shell), demolition jaw, electromagnet, hydraulic shears .	Resolution No. 14 of February 19, 2020	0	31/12/2021

8427.10.90	Ex 186	independent conveyors on wheels multidirectional type AGV (Automated Guided Vehicle) used to move the finished product type, cardboard boxes and / or various envelopes, the maximum dimensions of up to 400 x 400 x 350mm (length x width x height), capable of maximum load carrying 10kg with gyro path guided by location and visual position by means of cameras accurately rate the presence code reading exceeding 99.99% and smaller code reading speed for reading 0.8s of QR CODE, turning 360 degrees on its own axis, capable of moving up 15.000peças / h maximum speed of 2m / s, acceleration 1.5m / s ² , with conveyor system for cargo discharge, wireless roaming and , intelligent power management working by 8am on a single charge may or may not contain battery quick charger, management	Resolution No. 14 of February 19, 2020	0	31/12/2021
8427.10.90	Ex 187	Platforms aerial work, scissor, driven by an electric motor powered by rechargeable batteries from only multi-voltage charger, self-propelled on wheels, with traction on the front axle, controlled by panel / control unit in containing platform "joystick", equipped with " deck "extensible platform of 1.22m, the maximum vertical lift of the platform equal to 13,95m (internally) with maximum load on the platform with the" deck "extensible retracted equal to 349kg.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8427.10.90	Ex 189	cargo handling vehicles, called "variable desk", with a maximum load capacity on the table less than 20.000kg, equipped with lifting devices, and may or may not be operated by remote control, table rotation equal to or exceeding 11 degrees, lateral inclination equal to or greater than 16 degrees, the front slope equal to or greater than 14 degrees, self-propelled, with drive by an electric motor, locomotion speed equal to or lower than 6m / min, and the function of the safe handling of components of large trucks, the type off-road, used in the mining industry.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8427.20.10	Ex 133	Forklift self-propelled, diesel engine, for lifting, transportation and storage of cargo, maximum load handling capacity to 25.000kg, with 2-stage tower lifting forks maximum height of 6,000 mm, 5-way control valve and side shifter.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8427.20.90	Ex 238	Platforms for aerial work with telescopic main boom on swivel base, capable of rotating the base 353 not continuous degrees, self-propelled wheeled, motor-driven diesel or bi-fuel, with traction 4 x 4, controlled by panel / unit control platform containing the "joystick", with the same maximum vertical lift platform 18,5m (inner base of the basket on the platform) and maximum horizontal extent of the platform equal to 12.3m, with a maximum load capacity on the same platform basket the 300kg unrestricted work.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8428.33.00	Ex 072	Conveyors combiners and synchronizers of empty containers from multiple inputs and single line output, which allows to work with containers of up to 66mm in diameter, the heights of up to 188mm and volume to 1L with manual height adjustment or motorized where the synchronization of containers is performed vacuum system through perforated mat and vibrating guides installed power of 5 kW and a production capacity of up 120.000latas / h.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8428.33.00	Ex 073	Modular conveyors 1 to 10 routes, to empty containers of aluminum, steel or plastic where the containers are conveyed hanging by a perforated modular network, assisted by vacuum, which allows to work with containers of up to 66 mm diameter, height up to 188mm and to 1L volume with manual height adjustment system or motor, installed power and up to 10kW capacity of up 150.000latas / h.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8428.39.90	Ex 244	Conveyors continuous action binder with deviation of various packages by means of sliding shoes for controlled shift control module (DCM) nominal capacity of up 5.750pacotes / h to 2m / s speed rating, fed by one or more points induction of automatic reading station, deviations rails, carrier, safety net electrical panel with programmable logic controller (PLC) and sensors.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8428.90.90	Ex 603	Mixers pharmaceutical asymmetrical 360 degree rotation in AISI 304L stainless steel with enhancer mixture, for post processing, grains and other solid materials in pharmaceutical containers with maximum capacities of 500 and the maximum speed 2.000L 5 to 15rpm, with capacity operating in reverse mode, equipped with automatic clamping system equipped with swivel locks, with or without pharmaceutically receptacle after the IBC type (Intermediate Bulk Container) equipped with "scanner" laser safety programmable logic controller (PLC) integrated into the computerized system "software" dedicated and man-machine interface (HMI) with touch screen of 15 inches.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8428.90.90	Ex 604	transport systems and classification requests and various computerized volumes, track-type in the dimensions of 800 x 410mm, which supports up to 15kg, capacity 17.000carros / h, driven by motors, controlled by programmable logic controller (PLC), endowed with system mechanical separation with 169,4m long, 154 cars and conveyors 308 (a car mats 2); Input stations 10 / semiautomatic feeding; outlet trough of the separator of specific dimensions for direct separation (70 outputs) and feeding buffer VFA (14 outputs), width 545mm; rejection rail (2 outputs), width 945mm, scanning devices to read 1D codes (bar codes) and 2D (QR Codes) through two camera systems "scanner", two "sets" of laser cubadoras used to move and sort finished goods like cardboard boxes and / or various envelopes, the maximum dimensions of up to 600 x350 x 350mm (length x width x height), to its classification and automated dispatch; belt conveyors with feeding systems for the induction and charge transport zones for shipment treated zone.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8428.90.90	Ex 605	ergonomic chairs for the discontinuous movement of mechanical ground by 3 wheels, enabling its fully adjustable offset for labor running workshops in general, with electric motor body positioning in 9 positions and headrest 5 position, control variable positioning speed driven with 2 hands, 2 magnetic trays for tools, working in spaces with minimum clearance of 35cm, down from more seat travel 11cm, higher stroke 66cm seat, stainless steel frame 304, capacity to support up to 136kg and 100 to complete 200ciclos 4s each other without clearance, with two batteries (rechargeable battery) incorporated 76Wh 28VDC and each respective electric charger and battery.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8428.90.90	Ex 606	Receptacles pharmaceutical type IBC, used for transport, mixing and keeping solid pharmaceutical bulk, stainless steel AISI 316L for contact areas with the product and AISI 304L for areas without contact with the product, with a nominal capacity of up to 2.000L with silicone seals, equipped with product loading door and air into filter cartridge polypropylene, product unloading compartment chute cone 60 degrees, four bars for lateral locking, stainless steel butterfly valves peripheral seal silicone cross section of 1.200 x 1.200mm 2.311mm and maximum height.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8428.90.90	Ex 607	Automatic truck burnt ceramic bricks, with a maximum operating or less 12,5t / h capacity, equipped with grippers able to operate manipulative weighing units exceeding 2 kg; Table chain; automatic pallet dispensers; metal structures and gantry electrical panel command.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8428.90.90	Ex 608	Electric machines, automatic, trocadoras molds for placement, drives, deletions and exchanges molds for plastic injection molding machines, molds amount of 2 loadable size molds min 2.500 x 1.000 x 1.650 and 2.500 x 1.900 x max 1.650mm (C * U x) of maximum height 1.385mm mold tables, maximum weight of the mold 30t, maximum speed of movement of the mold 10m / 1 2 phase motor for mold changing table (1.5kW, 440V - AC) AC motors 4 for roller drive propeller (2.2kW, 440V - AC), heat exchanger size 5.650 x 2.950 x 1.225mm (L x W x H), the maximum mold weight 30t, COM12 nearby sensors bridge size of 3000 x 800 x 1.385mm (L x W x H), geared drive with brake, diameters of the molds transport roller 160mm, with functions of air cylinders for locks, anti-drop air cylinder, "Giroflex" abnormality with siren with security devices,	Resolution No. 14 of February 19, 2020	0	31/12/2021
8429.52.19	Ex 055	Self-propelled mini excavators on wheels, able to make full 360 degrees, with a diesel engine with a net nominal power of 40,8kW (54,5HP) to 2.400rpm, gross power of 42,4kW (56,8HP) to 2.400rpm, 21kgf.m maximum torque (206nm) at 1.550rpm spear 3m, 1.60m arm, and bucket operating 0,175m³ weight 5.550kg.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8429.52.19	Ex 056	Mini self-propelled bulldozers, with superstructure able to make a 360 degrees, with steel tracks, cabin with closed operations with structure type ROPS and OPG, with the hydraulic boom operation controlled by "joystick" with diesel engine vertical 4-cylinder water-cooled with the power 54,7kW 2.200rpm with quick coupler, maximum digging force equal to the 54,3kN 42,3kN shell and arm, maximum speed of displacement equal to 4 (high) and 2.2km / h (low) and operating weight of 9.825kg.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8429.52.19	Ex 057	self-propelled excavator capable of performing 360-degree rotation, by a diesel engine with six cylinders net nominal power of 252kW (337.9HP) at 1.800rpm (SAE J1349), and gross power of 257kw (345HP) at 1.800rpm (saej1995) with : - launches 6,3m - arm 2.9 million and operating weight of 50,8t equipped with SPC control system (smart power control), the unit value (CIF) not exceeding US \$ 654,199.03.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8429.52.19	Ex 058	self-propelled excavator capable of performing 360-degree rotation, by a diesel engine with six cylinders net nominal power of 354kW (481HP) at 1.800rpm (SAE J1349), and gross power of 354kW (481HP) at 1.800rpm (saej1995) with: - 7,7m boom 6.65 to - 2.60 and operating arm 3,55m weight to 75.5 77,1t equipped with SPC control system (smart power control) unit value (CIF) not greater than R \$ 1,516,182.69.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8430.41.20	Ex 039	Drilling soil, self-propelled crawler, rotary type, capable of drilling in the range 270 to 444mm in diameter boreholes in single stage maximum depth exceeding 19,8m, on the maximum load greater than or equal to drill 68.038kg, operating weight or less 181.437kg and air compressor operating pressure equal to or less than 65psi.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8430.41.20	Ex 040	rock drilling equipment, self propelling crawler, equipped with 328kW diesel engine and the screw-type compressor with air flow 24,4m ³ / min and up to 24bar working pressure, with a fixed or extendable arm provided with the head rotating designed for drilling with a bottom hammer (DTH) of 4, 5 or 6 inches for execution holes with diameters between 90 and 165 mm, hole depth of up to 40m and cabin air conditioning and certified FOPS / ROPS.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8431.41.00	Ex 011	Gripper mechanical manipulators for use in materials with operating weight of 20 to 55t, with a minimum volumetric capacity and maximum 0,5m ³ 1,10m ³ with maximum lifting capacity of 20t, max height 2.310mm; maximum hydraulic oil pressure in the opening and closing of the gripper equal to 345bar, flow in opening and closing the gripper equal to 100L / min, maximum hydraulic oil pressure in the claw rotating equal to 345bar, maximum flow claw rotating equal to 34L / min, provided with clamps 5, 5 hydraulic cylinders with inner shaft; 1 rotary bearing; 1 1.825Nm hydraulic motor with torque.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8431.49.22	Ex 004	Links segmented and articulated master, consisting of special alloy steel obtained by the process of forging hot, and thermal treatment, with hardness values comprised between 285 and 375 Brinell (HB), manufactured by specific project geometry for fitting not serrated, type "friendly hand" with step between 140 and 340mm, with geometry and dimensional own exclusive to compose the bearing current, self-propelled tractor, type "Bulldozer" or excavator.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8432.29.00	Ex 006	Cultivators for soil cultivation (agricultural, horticultural or forest), with a gasoline engine, power 6,5cv, displacement of 196cc, compression ratio 8.5: 1, diameter 68mm and 54mm stroke, tank capacity fuel 6L, adjustable control handlebars vertically and horizontally for operation in both directions, front axle tires with wheels with traction, 8-inch steel wheels, rear axle hoes rotating, following three different sets of blades for use, a pair with 3 blades, curved blades with a pair a pair with concave blades with rear height regulator blades with steel wheel.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8433.51.00	Ex 006	Combine harvesters for rice dual rotor system harvesting, threshing drum by 1.850mm in length, with three exits for separating grain, the grain with or without storage tank with capacity 1.670L, vertical diesel engine cylinders 4 with power rotating at 2.500rpm 62,1kW water cooled, tensile mats with width 550mm and length of 1.750mm or 1.700, automatic lateral leveling adjustment, the cutting deck with a width of 1.975mm, height adjustable crop 30 to 150 cm, with a throttle lever with buttons for cutting height adjustment with visible cutter bar to the operator maneuvers of the steering wheel with adjustable height, speed automatically reduced when executing curves, ensuring more accurate and reliable rotations with capacity to perform spins 360 degrees (the shaft itself) with motion system switched between the mats.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8433.53.00	Ex 002	Harvesters or towed carrot coupled on the 3rd point of the tractor to 1, 2 or 3 lines, to allow the harvest of 1 ha / day with the first line machines; to 2ha / day with machines of 2 lines and up to 3 ha / day with 3-line machines equipped with automatic adjustment of depth with angle sensor system, self-adjusting platform alignment in carrot crop line with System angle sensors, floating hoes technology "floating share" small movements up elements and falls no impact on the position of independent knives obtaining greater stability oscillator vibrator assembly for tuber earth removal, the sheet cutting assembly (topper) driven gearbox oil bathed, and dala (treadmill) discharge or coupled bucket.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8433.59.90	Ex 050	self-propelled forage equipment with internal system (either at the power unit) fractionation (chipping) of the product harvested with internal grains processing system friction process with rollers driven by diesel engine with power equal to or greater than 220kW but less than or equal to 315kW, capable of coupling with product cutting width platforms exceeding 4.5 m but less than or equal to 6m or product gathering platforms width equal to or greater than 2,623m, but less than or equal to 3,599m, gifted or not one or more cutting decks products, gifted or not one or more products of gathering platforms.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8433.60.29	Ex 009	Blood detection modules inside eggs, red or white, through expecto photographic analysis by narrowband lights (LED), with an accuracy of 97% or greater for egg whites and 91% or greater for red eggs.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8436.10.00	Ex 052	Combinations of machines for the production of feed for poultry controlled by PLC (Programmable Logic Controller) with not less than 35t / h nominal capacity, consisting of: pelletizer matrix with internal diameter equal to 900 mm, effective surface 9.189cm ² pellet with 2 rolls with diameter 435mm, with an open surface area of 37.4%, driven by high efficiency motor (IE3) with power equal to or greater than 400kW by means of a V transmission and a toothed belt, equipped with thread Feed pelleting for load control, active detection roller slip and a matrix cleaning mode; steam mixer with hot start with a diameter of 500mm with control and reduction of the steam system; long term conditioning vessel for the product with maximum retention time of 3 minutes or capacity of 96m ³ / h; counterflow cooler with rotary distributor and hopper	Resolution No. 14 of February 19, 2020	0	31/12/2021
8436.10.00	Ex 053	Combinations of machines for preparing sauces used in food / feed for animals, consisting of: Emulsion unit components - feed and brine, 400L capacity with microcortador system, load cell / weighing; unit solution (brine), stainless steel, 2.000L capacity with transfer pump and stirrer; unit for small pieces of meat, stainless steel 500L capacity with transfer pump and agitator.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8436.10.00	Ex 054	Combinations machines for pelletizing feed poultry and / or pork and / or ruminants, composed of: screw conveyor, capable of 55m ² / h or more, steam mixer with 500mm diameter and 2,000 mm long stainless steel unit vapor for 2 to 4barg control pressure and a capacity of 750 1.750kh / h steam reduction unit 8 to the pressure of 12barg to 2 4barg pressure and capacity of 250 a1.650kg / hr long retainer duration - LTV 3.000mm and 96m ³ / h with 1 min retention and 32m ³ / h 3min retention 625kg / m ³ , with thermal insulation in electrical coil pelletizer with 900mm diameter and 275mm array depth with a production capacity of 25t / h of 90% PDI, equipped with AC motor 315kW cage and transmission system in stages 2-belt "V" and toothed belt with automated mechanical adjustment of the rolls and slip detection system	Resolution No. 14 of February 19, 2020	0	31/12/2021
8436.80.00	Ex 100	automatic feeders for feeding management pigs housed in groups in nursery phases, growing and finishing with automatic exact amount adjustment and accurate "mix" of different types of feed in accordance with the passage of time and growth of the animals, capable of 15 to 50 serve to feed animals, 100% autonomous, provided with: electronic feeder feed dispenser; feed tank with capacity of up to 120kg; own wireless communication (WiFi); data converter; connection cables; "App" suitable for use in mobile devices (phones and tablets); and "software" central command system.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8436.80.00	Ex 101	Equipment for automatic vaccination, separation and classification of fish in three size categories, with vaccination capacity of up 8.500peixes / h and vaccine accuracy of 98%.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8436.80.00	Ex 102	Pneumatic machines defoliating for cleaning vine leaves the pergola systems and awnings trellises through a cardam shaft PTO of the attached tractor with connecting three points, platform tilt adjustment 30 and 40 degrees with hydraulic drive, with rotating a driven hydraulically with working pressure of 0,8 to 1 bar controlled by a pressure gauge of 1 to 2km working speed / hr with intermittent jet of compressed air to the loosening and removal of the leaves and foliage, equipped with a hydraulic control arm with a rotary swivel equipped with the compressor, expansion tank, air filter and the command hydraulic extender "joystick" 8 functions.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8437.10.00	Ex 014	Instruments for analysis and simultaneous and automatic sorting seeds / grains based on physical and / or biochemical each seed core / grain through transport system grain-to-grain permitted by a perforated and vacuum belt, a spectrometer in the range infrared a 3D vision camera, an industrial PC, programmable logic controller (PLC) with I / O modules and compressed air valves 3, with analysis of up to 50sementes / grain / s.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8438.10.00	Ex 242	Combinations of automatic machines, with programmable logic controller (PLC) and sensitive to the touch panel operation, for mass production hamburger buns and hot dog with capacity of up 36.000pães burger / h mass weight between 25 170 g composed of: extruder mass including the mass degassing system with four outputs for division with cutting accuracy of +/- 1% by mass moulder with Refrigerate and 4 bars with a special surface for rounding, applicator flour with collecting excess for recirculation and filtration, pre continuous fermenter intermediate with 4 baskets by gondola and maximum residence time of 117s, laminator with 2 cylinders game with adjustable vents, molding with pressure ruler, indexing bread on the baking sheets with treadmill magnetic, transfer roller servo controlled, rotators of pan and forms orbital shaker	Resolution No. 14 of February 19, 2020	0	31/12/2021
8438.10.00	Ex 243	Combinations of machines for the production of raw dough of bread bisnaguinha type, with productivity 2.800kg / h, discharge pulse 5,7batch / h, size of the sponge mass 220kg, total time of kneading 8min, composed of: robot system for the automatic movement of pots with 9 stations and displacement air rail; 2 dosing stations with the reception of the ingredients, stainless steel caps with pneumatic piston movable closure; 2 Industrial dough mixers with a head and each mobile pots, straight arms, arms with drive motors and joined speeds, pan scraper, melt temperature probe closure cap with ingredients from inlet mouth; 16 cars pots with total volume of 950L; lift-dumper pans with independent lifting and turning movements, automatic rotation system and scraping the walls and bottom of the pots, turning and unloading programmable	Resolution No. 14 of February 19, 2020	0	31/12/2021
8438.10.00	Ex 244	Combinations of machines for the production of masses for breads with a capacity of 400kg / cycle, consisting of: infrastructure for dosing solid and liquid ingredients; 2 kneaders of stainless steel column with a volume of the tank (pot) of 520L each automatic pasta discharge vessel at the bottom of tilting head with spiral blades, scrapers and side speed control; wake outgoing carrier to extraction and mass elevation; programmable logic controllers (PLC) and HMI panel (Human Machine Interface) touch (touchscreen) of 7 inches.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8438.40.00	Ex 017	Combinations of automatic machines for brewing of malt grains and aeration of the wort, comprising water mixer 8 enzymes dosing stations; Acting Baking system with an internal stirrer 1.253hl capacity and diameter of 6000mm, mashing tank for conversion of sugars with an internal stirrer 1.253hl capacity and diameter of 6,000 mm; retention basin capable of 1.408hl diameter and 5000mm; pre-heating and propelling the wort with plate heat exchanger, the capacity of 350m ³ / h; wort cooking system, with an internal heater shells and tubes, 1.276hl capacity and diameter of 6200mm; hop dosing system with stainless steel tanks and capacity of 542L; System wort clarification by decantation (whirlpool), with capacity of 1505 hl diameter of 6.800mm; heat exchanger; energy recovery system with changer	Resolution No. 14 of February 19, 2020	0	31/12/2021
8438.50.00	Ex 361	Machine desossadoras semiautomatic chest to breast chicken type "breast cap", with adjustable capacity to 50peitos / min, bypass, with successive application of skin removal procedures, removal of bone player, individually measuring the length of the breasts, cut and separation of bone meat, manual separation of breast fillet and tender, operating with PLC and relying on control panel and supply mats and final products.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8438.50.00	Ex 362	Seasoning injection molding machine in meat products, manufactured in stainless steel, with the panel "touchscreen" filtering system with 320L capacity, 212 needles threaded with height adjustment, with injection flow of the programmable needles conveyor with a width of 750mm and adjustable speed, maximum capacity meat output of 5,000 kg / h.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8438.50.00	Ex 363	Brine Cooling machines, manufactured in stainless steel with monitoring system operation and gun control, cooling unit with ZCH4 added and glycol as coolant, brine pump and glycol with a capacity of 1.5 and 0,37kW respectively.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8438.60.00	Ex 021	Systems straps with pulsed electric field, for treatment of potatoes, with rectangular pulse waveform, unipolar, made in stainless steel, with a maximum capacity of 28 to 60T / H potatoes in a mixture of water and potatoes.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8439.10.90	Ex 056	functional units for refining, screening and cleaning pulp cellulose such as "Kraft", a maximum of 2,000t / day of production capacity comprising: pressurized air, and refiner pulp reject refiner, pulp washers presses the respective hydraulic units, average pulp stirring and low consistency threads pulp carriers, debuggers with basket of slits and respective gear, sets of sand separators and heavy materials, bottom discharge scrapers towers with reducing fiber filters under vacuum type rotating drum with respective drive and exhaust fans, Kappa number analyzers, meters online pH, consistency meters and rotary blade type and conductivity meters.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8439.10.90	Ex 057	Combinations machines for purification, washing cellulose pulp such as "Kraft" maximum production capacity 2,000t / day, consisting of: pressurized air, and refiner pulp "cleaners" presses pulp washers respective hydraulic motors and drives hydraulic, gas exhaust fans, gas scrubbers, medium consistency pump with respective vacuum pumps, special centrifugal pumps, mean pulp stirring and low consistency threads pulp carriers, debuggers with respective reducers, strainers with basket holes , debuggers with basket slots, sand separators assemblies, heat exchangers hull type and tube type heat exchanger plates, bottom discharge scrapers towers with reducing fiber rotary drum type filters with respective drives, number of analyzers Kappa, online pH meters, consistency meters and blade	Resolution No. 14 of February 19, 2020	0	31/12/2021
8441.10.90	Ex 108	Machines for longitudinal and transverse cutting of cardboard coils, coated or not, overlapped or not, operating with dual cross-sectional synchronized by means of rotating rollers with helical blades, longitudinal section through the circular knives, double door-coils to coils maximum width of 1.830mm, cut paper having a maximum weight exceeding 600g / m, maximum cutting length and width of 1.650mm useful after trimming, with automatic unloading and stacking the single sheets in the output, maximum speed of 300m / min.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8441.10.90	Ex 109	electronic machines to cut, mark embossed, to trace and dotting mainly paper and can also work other materials like vinyl and fabric with double stroller, to carry out simultaneous work, operating connected to the computer via a cable USB and execute the commands in accordance with a unique software, cutting the paper in maximum area of 30.48 x 60cm, maximum depth of 2 mm and maximum strength of 400 g / m ² .	Resolution No. 14 of February 19, 2020	0	31/12/2021
8441.20.00	Ex 043	Fully automatic machines for making paper bags weight between 45 and 140g / m ² , square bottom, with handle, fed by rolls of a width between 430 and 770mm, maximum diameter of 1.200mm; body width of the bags between 150 and 220 mm; paper tube length between 230 and 370mm; Handle size of 100mm, with reinforcing strap fed by paper rolls and paper cord, straps manufacturing system; handles delivery system; tube forming system; training system and automatic feed back with maximum capacity exceeding 150sacolas / min.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8441.30.90	Ex 079	forming boxes in paper machines, especially for use as lunch boxes and trays fed by sheets previously cut and creased, the welding process using heat and / or adhesive application, a maximum speed of 40 or 45peças / min, maximum depth of 60 or 120mm, weight of the substrate up to 400 g / m ² .	Resolution No. 14 of February 19, 2020	0	31/12/2021
8441.40.00	Ex 039	Machines for making straws paper fed by reels, the thickness of the straw up to 1mm, cut length of 100 to 800mm, a maximum speed of 50 to 80m / min, unwinding type "non-stop" glue-applying unit, unit formation of the stick with subsequent cutting individualization, with or without outfeed conveyor.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8441.40.00	Ex 040	Machines for the manufacture of paper covers, from plain paper or both sides laminated PP and varnished paper, power 10kW, with an average production capacity of 100unid / min diameters of the covers between 55 and 145mm and may have sets mold covers, training and operating by ultrasound welding system.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8441.40.00	Ex 041	Example 041 - automatic machines for the manufacture of paper cups from paper that weighs 150 to 350g / m ² paper laminated polyethylene on one side, power 4kW, with an average capacity of 70unid / min, measurements of cups to 550ml in volume, and may have sets of mold cups operating by ultrasound welding and forming and conveying system and automatic stacking system.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8441.40.00	Ex 042	Machines for the manufacture of paper pots from paper that weighs 150 to 350g / m ² and one or two layers of polyethylene film, power of 6kW, with an average capacity of 50unid / min measurements the pots by volume to 1,500 ml, and may have sets of molds pots, operating by formation and ultrasonic welding system and automatic stacking system.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8441.40.00	Ex 043	Machine for manufacturing paper caps, automatic fed by reels can fabricate caps with diameter up to 145mm, weight up to 280g / m ² , a capacity exceeding 60peças / min.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8441.80.00	Ex 111	Automatic rotating transverse cutting of corrugated cardboard, with a cut level of Speed up to 300m / min, maximum cutting width of up to 2.500mm, with a system that controls the exchange of requests and communicates with the other devices of the dry end.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8441.80.00	Ex 112	Automatic combined machine for corrugating for forming and stacking of continuous sheets of corrugated cardboard, with creasing and cutting in the transverse direction, bending system and carrier system for automatic separation of cells, speeds up to 200m / min, width of the plates up to 2,500 mm and maximum stack height of up to 1,200 mm.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8443.19.10	Ex 063	industrial high-speed automatic printers for silk-screen printing flat screens, with automatic record printing, ADF front gathering and sheet alignment system by CCD camera, maximum substrate size (mm) 800 x 600, substrate thickness (mm) between 0.1 and 3.0 * 1 maximum weight substrate 1k, printable maximum size (mm) 800 x 585, maximum frame size (mm) 1,100 x 1,000 maximum print speed (HPI) 650 * 2.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8443.19.90	Ex 160	UV matrix module laser printing machines made by a neodymium crystal with a wavelength less than 355nm and average power less than 2W, for industrial use, with cumulative functions or not to schedule, encode, personalize, address and date products or packaging shapes, surfaces and various materials, with a maximum speed equal to or higher printing 500caracteres / s, recording with the product static or moving, with a maximum linear speed of the printed products to be not less than 300m / min)	Resolution No. 14 of February 19, 2020	0	31/12/2021
8443.39.10	Ex 348	Digital printing machines inkjet printer for industrial use, with a resolution ranging between 360 and 1.200dpi and speed of up to 23m ² / h print media to a maximum thickness of 1 mm and a maximum width of 161cm printing, print engine based on printheads with piezoelectric element, with 2 printheads, operated with UV ink and curing by LED lamps positioned next to the print heads, 8 slot ink with USB and "Ethernet" connection, printing system (MAPS), drops of volume control system (WAVEFORM), dot / media power automatic adjustment system (DAS), guns checking system (NCU), guns recovery system (NRS).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8451.40.29	Ex 015	Industrial machines for washing, bleaching, customize and apply treatment in finishing textiles, apparel and garments by the ozone generation (O3) of 1,000 g / h, analysis and concentration in real time that is being generated; generated by the separation of O2 provided by PSA, stored in a tank and applied to a stainless steel basket, all sealed with rubber gaskets and Teflon, with O3 destruction system through chemical "carulite" to release the doors; inner drum rotating in both directions, controlled by frequency inverter; buttons to vascular and lowering the basket start process, stop process, and alarm problems, consisting of a "desk" to control the applicator basket, which is programmed to power O3 and time desired, and can be connected to two baskets (having ability to work and to control the baskets 2); CLP has screen and "touch", cooled by closed loop controlled system	Resolution No. 14 of February 19, 2020	0	31/12/2021

8451.40.29	Ex 016	Industrial machines for washing, bleaching, customize and apply finishing treatment for textiles, apparel and garments through O3 (ozone) generated by separation of O2 provided by PSA, stored in a tank and applied to a basket of stainless steel, all sealed with rubber gaskets and Teflon, with O3 destruction system through chemical "carulite"; inner drum rotating in both directions, controlled by frequency inverter; vascular buttons and lowering the basket start process, stop process, and trouble alarm composed of a "desk", where the program O3 power and time desired, and can be connected to two baskets; PLC screen and "touch" cold loop controlled by a mini "chiller" (power 5.000kcal).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8454.30.90	Ex 083	Machine combinations for the manufacture of automotive pistons with or without ring or insert port salt by the casting process by gravity piston in the vertical or horizontal position with the ability to merge two pistons per cycle, as follows: 2 descarregadoras machines fused pistons feeding 440V; with controller composed of: retaining furnace 2; water containers; 2 tracks; 2 boxes for scrap; box aluminum oxide; oven treatment by the "Alfin" process; 6-axis robot; PLC (Programmable Logic Control) and "software".	Resolution No. 14 of February 19, 2020	0	31/12/2021
8455.21.90	Ex 041	Machine combinations for casting and continuous rolling of aluminum alloy rods, including 1,120 and 6,201 of 9:52 or 12mm in diameter with a maximum output capacity of 5t / h composed of: degassing system assembly and filtering online; set of ceramic filter assembly of the liquid metal; Wire feeder assembly Al-Ti-B; casting machine 4-wheel assembly and pouring ladle; set of front drive unit ("pintch-roll" shear bar); cutting scissor assembly aluminum bar; straightener assembly aluminum bar; rolling assembly 15 consisting heads; Protective cover set of the hydraulic system of the laminator; set of oil lubricating system for rolling; lubrication system assembly by emulsion mill; Emulsion vacuum filter assembly for the paper band; set of vertical winding jumbo with	Resolution No. 14 of February 19, 2020	0	31/12/2021
8456.11.11	Ex 019	Machines for cutting metal plates by laser fiber with numerical control (CNC) with cutting work area up to 4070 x 2.050mm, with simultaneous positioning speed of the X and Y axes of 170m / min with automatic tool changer up to 16 nozzles with automatic loading and unloading system of metallic plates with 5 drawers and storage capacity of up to 15t charge and discharge cycles of 120s with cell separation robot with 5 parts controllable axes.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8456.11.11	Ex 020	Machines for cutting metal plates by laser fiber with thick plates cut capacity exceeding 8mm, the material with maximum dimensions of 3,106 x 1.582mm, the maximum loading capacity table of 1.100kg with loading and unloading handler machine for bales of raw material up to 3t 60s and cycles at maximum speed for positioning the X and Y axes of 140m / min, with automatic changer up to 40 nozzles with numerical control (CNC).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8457.10.00	Ex 423	vertical machining centers, double column, with structure pads type box, equipped with numerical control (CNC) and can milling, boring, drilling and tapping, with ongoing 3.200mm X, Y 1,700mm (with option to 2,200) and Z 1.000mm, 1.800mm distance between columns rapid traverse axes x 15m / min, Y, 20m / min, Z 15m / min, the table size of 1,500 x 3,000 mm, maximum load capacity over 10,000kg the table, spindle torque up to 605Nm, spindle built up at maximum speed 6.000rpm optional rotary table (4th axis), the clamping cone BT50 tool magazine optional groups of up to 40 tools, length of 300mm to tool maximum diameter of 200mm, a maximum weight of 20 kg tool with complete system for cooling and lubrication.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8457.10.00	Ex 424	Vertical Machining Centers, double column, with shims box-like structure, provided with numerical control (CNC) may milling, boring, drilling and tapping, with current X, Y equals 5,500, 3,200 and 1,000 mm Z, with optional 1.250mm respectively, the distance between columns of 2.800mm rapid traverse axes x and Y of 15m / min, Z 10m / min, the table size of 2000 x 5.000mm, the maximum load capacity on the table 22,000 kg spindle torque up to 1.023Nm, spindle built up at maximum speed 4.000rpm optional hydraulic balancing system Z-axis, clamping cone BT50 tool magazine optional groups of up to 40 tools, the length tool to 300mm, maximum diameter of 220mm, a maximum weight of 20 kg tool with complete system for cooling and lubrication.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8457.10.00	Ex 425	mobile column machining centers and fixed bed with numerical control - CNC, with work table in size of 2780 x 520mm, with a maximum load capacity of 2,000 kg, with X courses equal to 2.300mm, Y equal to 520mm and Z equal to 600 mm, the maximum spindle speed of 12.000rpm, spindle type "built in" with integrated motor with rapid traverse of 40m / min, X axis with bearing refrigerated for better accuracy with automatic exchange magazine tools with mobile magazine with axis of the cone tree type bbt40, with desk sharing system in the form of a double pallet to work with the machine in the machining station and the loading station in automatic mode or with the possibility to work with whole table with entire shaft extension X.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8457.10.00	Ex 426	numerical control machining centers (CNC) for machining automotive engine cylinder heads, with 204s / piece cycle time with 5 axes controlled simultaneously with the axes travel x, y and z equal to 500mm and scope of the axis of rotation A B of 635mm and 620mm, fast forward on the X, Y and Z 60m / min, with a spindle speed of 200 to 12.000rpm, with a storage capacity of up to 20 tools with a maximum diameter of 115mm and a maximum length of 320mm with coolant tank with a chip carrier, with or without magnetic separator, with a mist collector, with tool assemblies for machining engine cylinder heads, with locking device cylinder head, with a system for attachment detection value unit (CIF) not exceeding US \$ 1,046,044.73.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8457.10.00	Ex 427	numerical control machining centers (CNC) for machining automotive engine blocks, with 204s / piece cycle time with 5 axes controlled simultaneously with the axes travel x, y and z equal to 500mm and scope of the axis of rotation A B of 635mm and 620mm, fast forward on the axes x, y and z 60m / min, with a spindle speed of 200 to 12.000rpm, with a storage capacity of up to 20 tools with a maximum diameter of 115 mm and a maximum length of 320 mm with coolant tank with a chip carrier, with or without magnetic separator, with a mist collector, with tool assemblies for engine blocks machined with fixture engine block with system for securing detection value unit (CIF) not exceeding US \$ 1,024,278.49.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8457.30.10	Ex 005	Machine multi-station simultaneous machining type "Transfer" with numerical control (CNC) and software customized process management and scheduling, have: loading and automatic unloading system with tele camera control and 8 machining units or more programmed and controlled by CNC with power drilling unit 5,5kW up to 6,000rpm and combined units drilling and tapping 5,5kW power up to 4,000rpm endowed table transfer technology with "Direct Drive" CNC axis to 50rpm with positioning time 0.4s station / station and accuracy of +/- 3 inches and the ability to produce up 900peças / h.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8458.11.99	Ex 224	horizontal turning centers for machining of metal parts, with numerical control (CNC), for turning, drilling, milling and thread (including off-center) with two spindles opposed capable of simultaneously machining with two spindles, two turrets door -tools with a capacity equal or superior to tool 10, with the lower tower stations 12 and the upper turret (multifunctional tower) provided with an automatic tool exchange system for up to 80 tools with the ability to torneá vel maximum diameter of 650mm, length torneá vel maximum equal to 1.500mm, strokes of the axes X, Y, Z, W, C and B, X = 645mm, 235mm X b = Y = 250mm, Za = Zb = 1.600mm 1.584mm, 1.584mm = W axis C with an inclination of 360 degrees and minimum programmable increment 0.0001 degree, the maximum rotation equal to 4.200rpm main spindle axis B with 240 degrees of inclination, the main engine power equal to 22 / 15kW and	Resolution No. 14 of February 19, 2020	0	31/12/2021
8459.21.10	Ex 001	radial vertical drills for internal hole of the injector body automotive fuel with 7 workstations 3 axis CNC, automatic feed axis displacement "x" with programmable linear motor and speed up to 100 m / min and acceleration of 20m / s2 coolant pressure 120bar, tolerance of up to 0.02mm and ensuring 1.66 cm and CMK CPK and CP and 1.33 for all characteristics; 3 has zones having a maximum rotation 10.000rpm; maximum machining diameter and length: 46mm diameter x 14.38; maximum stroke in the Z axis and axis of 200mm x 1,300mm; 7 provided with machining stations, designed for drilling and facing the diesel injector nozzle body; power system and automatic desalimantação; with gutters with capacity of 40 to 50peças, and parts selection system after machining; Electropneumatic with claws system for transport to the clamp, the closing clamp parts by	Resolution No. 14 of February 19, 2020	0	31/12/2021

8460.12.00	Ex 011	Machines to process flat metal grinding wheels arranged two independent operating medium with diameters of 500mm and numerical control (CNC); speed range between 100 and 1.200rpm, with power of 26kW on each spindle and speed of 30m / s; maximum thickness of 17mm workpiece; provided with process measuring device; automatic loading and unloading of parts.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8460.12.00	Ex 012	lapidadoras machines with double sided (upper and lower) for grinding flat metal parts, provided with programmable logic controller (PLC); dishes with a diameter of 720mm; 292mm width of the ring; 1.800dan maximum load pressure; Speed of plates: upper plate: 300rpm, 420rpm lower plate; central drive power 2,5kW; speed of 83rpm of the central unit; equipped with cooling of the work plate.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8460.19.00	Ex 005	Machines for rectifying the flat faces component of the "turbine" fuel pump for motor vehicles; consisting of: component feeder to the transfer belt, equipped with 16 positions (charge and discharge system); grinding system; panel with AC and auxiliary pneumatic supply with current and power 32W 64A.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8460.23.00	Ex 032	Machine tools for grinding external cylindrical surface, dressing provided with a rotatable roller in the process; used with wheel diameter 398 and 14mm wide and rotation 2.400rpm; Power of spindle 18kVA; with measurement process by twin probe; computerized numerical control (CNC); Hydraulic system for transporting the parts in input and output; system with treadmill for grounds for exemption; a rotary drum for feeding the machine; Workpiece rotational speed of 995rpm.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8460.23.00	Ex 033	Machine tools for grinding external cylindrical surface, dressing provided with a rotatable roller in the process; used with wheel diameter 406 and 60mm wide and rotation 1.500rpm; Power of spindle 36kVA; with measurement process by twin probe; computerized numerical control (CNC); Hydraulic system for transporting the parts in input and output; system with treadmill for grounds for exemption; a rotary drum for feeding the machine; forward speed of 8m / min.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8460.23.00	Ex 034	Machine tools for external grinding of cylindrical surfaces with numerical control; with measurement process by twin probe, wheelbase 400mm, 320mm x course at a speed of 10m / min, z ongoing 650mm speed 20m / min, spindle power of 9,5kW, maximum speed 1.500rpm zone.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8460.31.00	Ex 183	Machine tools for manufacturing, sharpening and / or regrind steel tools and / or hard metal, numerical control (CNC), with 5 or more controlled axes, all axes with direct drives with linear motors, machine based on concrete with polymers with displacement axes X (586 mm) / Y (408mm) / Z242mm linear and rotary axes a (360 deg) and C (264 deg), all without direct drive pulleys and / or belts.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8460.31.00	Ex 184	Machine tools for producing and / or regrind rotary cutting tools of hard metal (HM), high speed steel (HSS) or polycrystalline diamond (PCD) with a maximum diameter of 400 mm by means of abrasive wheels and / or rotating electrode with 0,0001mm linear precision with 5-axis numerical control (CNC), with courses x, y and z of 500 x 350 x 700mm, with axis (C) of rotation table angular turning -185 to +135 degrees and axis (a) of the main head with infinite degree, load system and automatic unloading of tools and / or parts, electrical power total of 25KVA.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8462.10.90	Ex 149	fins forming machines for manufacturing hives for automotive heat exchangers from aluminum foil in coil specifications in width between 11,5 and 54mm, thickness 0.05 to 0.15 mm, fin height of conformal between 4 and 10mm, maximum input speed of up to 300m / min with the strip trimming system of two parallel runways and capacity to 80cortes / min in each lane, provided with: double unwinder with tilt, voltage control unit strip servo motor strip trimming system in two parallel tracks, unity for shaping and cutting of louvers of the fins, fin pitch adjustment system for final length, spindle driven by servo motor for synchronizing the flap position and system cutting guillotine type and second channel output chute.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8462.21.00	Ex 283	compact electric benders EG series with activation by double servo motor (DSP) for ball screw, one to hold folds with high accuracy and one to approach and retreat at high speed with backstop 5 axes incorporating L-Shift system controlled by CNC control with an accuracy and speed return to 220mm / s, warp up to 25mm / s, positioning accuracy of 1 micron, with or without angle sensor Bi-s.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8462.21.00	Ex 284	electric bending machines with hybrid hydraulic servo system driven by four cylinders, with numerical control, CNC arrow compensation displacing the CNC lower tool, driven by wireless pedal fastening system and alignment of the machine tool punch and matrix system security with automatic fold position adjustment, operating panel "touch", arranged with graphical programming system in charge of machine designs with definition 3D and "software" specific installed in charge of "TecZone Bend" machine, which allows open files in 3D and automatically generate the program, the variable matrix position, with front and rear lighting to aid in the work, laser beam for precise positioning	Resolution No. 14 of February 19, 2020	0	31/12/2021
8462.21.00	Ex 285	Machines for bending metal panels, numerical control (CNC) with double capacity up and down, the maximum width of the sheet 1.524mm, 2.495mm maximum length of the plate, the plate thickness between 0.4 4mm and with manipulator arm movement in the horizontal plane, for rotating and positioning the plate.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8463.30.00	Ex 141	Combinations of machines for industrial production and packaging of metallic staples, composed of: 45t press stamper with double system of articulated arms and four guide columns, adjustable speed up to 220batidas / min; supporting band coils glued containing 2 coils with quick-change system; unwinder electronically synchronized with the glued web speed of the press; with automatic wrapping of industrial metal forming clips, fold, glue, fills and closes automatically packing around the staples with packaging capacity for up 200pentes / min; controlled by programmable logic controller (PLC).	Resolution No. 14 of February 19, 2020	0	31/12/2021
8464.20.90	Ex 036	machine combinations for surface treatment of ornamental plates, composed of: autoloader, motorized roller conveyors connection, automatic polishing machine to polish plates with 19 complete spindles with integrated horizontal oscillating movement, endowed with espatulantes heads holders abrasive 6 or shoes 8 capable of processing sheets with working width up to 2200 mm and of course increase the mandrel up to 160mm; Door-lock mandrel constructed in a single piece of steel, the travel speed to catch up to 80.000mm / min; electronics command per screen "touchscreen" allowing full control of the equipment; the plate reading system (SEL 60) installed in the entrance polishing electronically determines the area susceptible to the polishing plate with automatic lubrication system, set up to three fans for drying the sheet; enceratriz automatic with up to 4	Resolution No. 14 of February 19, 2020	0	31/12/2021
8465.94.00	Ex 043	Presses versatile vacuum with silicone rubber membrane and drying module for folding, rolling and laminating, pressing total area of membrane within the framework 3.140 x 1.290mm, operation mode hot pressed and cold pressed, 18mm plate, compact with 44 points suction, maximum temperature 80 degrees Celsius, vacuum ball valve for evacuating air control, programmable controller (PLC), folding heating dome one hydraulic piston, maximum temperature 140 degrees Celsius, temperature control digital 3-heating convection elements with distribution air 10 kW each, the opening system and hydraulic lock, with a maximum height heating pressure closed 500mm, vacuum pump with rotary vane, dry operation, suction power 100m ³ / h with automatic and continuous operation up to 9T / m ² (100mbar), heat resistant silicone membrane 230 to	Resolution No. 14 of February 19, 2020	0	31/12/2021
8465.95.91	Ex 005	Machine tools for drilling multiple times in a cycle of wood pieces with a length of workpiece 350mm minimum and maximum of 2.500mm, equipped with 14 drilling units, with six units Electropneumatic horizontal 3kW motor (4.500rpm) 6 Electropneumatic units with vertical 3kW motor (4500rpm) with two side units with horizontal Electropneumatic 3kW motor (2.800rpm) maximum drilling 85mm, adjustable door 6 and independent parts and fixing rollers reference pins with stock set in the X axis adjustable parts, with automatic front loader compound magazine for parts, maximum production 10peças / min, controlled by a PLC.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8465.99.00	Ex 162	gauges separators 80 separating compartments, processing capacity of 160tábuas / min and storage 1.000m ³ controlled by PLC (Programmable Logic Controller) through the use of sensors.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8466.93.20	Ex 019	Continuous tilting turntables for simultaneous 5-axis machining, and contramancal rotary axes with high dynamic drive with positioning division axis B 0.001 x 360 degrees, and the tilting axis A spinning range of -180 to +45 degrees (suspended).	Resolution No. 14 of February 19, 2020	0	31/12/2021

8466.93.20	Ex 020	320mm diameter rotary table driven by crown and endless, with up to 1,500 kg load capacity with hydraulic bearing, hydraulic locking 3.100Nm and free passage hole 120mm, precision indexing arches 14-second, equipped with command itself for use in machining centers.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8466.93.20	Ex 021	Cars transverse steel or cast iron GGG-60; fused, soldered or machined; used in the panning axis (X axis) machining centers to drive quill and motofuso; with sizes from 400 x 800 x 1.850mm; with dimensional accuracy of within +/- 0.05 mm in major faces or machined to +/- 1.5 mm in the major faces of the cast or welded structure; and geometric tolerances of parallelism, perpendicularity, and flatness of up to 0.01 mm in major faces machined.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8467.89.00	Ex 033	Hand tools driven by electric motor 9 ampere-phase 230W double insulation maximum speed of 12rpm and minimum 4RPM for attachment soil cuttings dimensions on the main unit 480 x 370 x 650mm dimensions of the reaction bar 120 x 1.670mm (length extension to 2.740mm) of the main unit weight 21kg.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8467.89.00	Ex 034	Hand Tools hydraulic crimping unit driven by a gasoline engine - 140rpm minimum and maximum 3.600rpm for fastening soil cuttings, the total dimensions 86 x 96 x 105cm and 205cm with open bars the bars weight 144kg closed tank filled with fluids.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8474.80.10	Ex 053	Machines for the manufacture of green sand molds for casting with horizontal dividing line applied in the casting of iron pieces without using molding boxes with dimensions of the mold width 550mm, 650mm in length and height adjustable with "encoder" linear between 120 and 220 mm per line division with speed without modeling the core 38 (s / box), the maximum dimensional accuracy of 0.25mm molding chamber, blowing the system with pressurized air aeration process, provided such pneumatic and hydraulic operation, ensuring horizontal operation and automatic control panel PLC (programmable logic controller), hydraulic pressure setting on the adjustable mold 1 to 16Mpa by the MMI (man machine interface), a security system protected by barrier and light sensors on the doors, automatic lubrication system of cylindrical guides, hydraulic unit with	Resolution No. 14 of February 19, 2020	0	31/12/2021
8474.90.00	Ex 054	Blanket rolls wet accumulators for the manufacture of fiber cement corrugated sheets, films endowed forming roll diameter of 1.650mm, pneumatic control system for cutting and extraction mechanism, laser thickness gauge, columns and supports for supporting the front machine, cylinder individual actuators, and film drive roller cutter.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8475.29.90	Ex 011	automatic ovens with 8 cameras to bend hot plates glasses for bus windshield with free mold space of 2,350 x 3,350 x 650mm, with capacity of 29peças / 8h for glasses 3 + 4 mm, total installed power of 636kW, controlled heating profile symmetrically pyrometers and thermocouples.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8477.10.11	Ex 091	molding machines injection with high precision plastic parts of multi-application with control PLC and control panel HMI (human / machine interface) thread laminator diameter 110mm, screw and barrel Bi metal, heating power cylinder 82, 8kW, proportional valve for the opening and closing movements of the mold, proportional valve for injection movements, automatic security door, variable pump servomotor coupled gears for energy saving, power of servomotors 37,55kW + 55kW, 4 drives / hydraulic males to mold the movable plate side + 4 drives / hydraulic males to mold on the fixed plate side, programmable hydraulic control electronics 4 "valve gates" (valved injection nozzles), 8000kN clamping force, the distance between the columns 1000 x 1000, press the opening 1.040mm, the minimum size of 630 x 630mm mold, systems	Resolution No. 14 of February 19, 2020	0	31/12/2021
8477.10.99	Ex 088	injection molding machine (micro-injection) for the production of small and micro parts, in thermoplastics, up to 420 degrees Celsius to 100 kN clamping force, the distance between columns 122 x 122mm with converter for motor speed control, USB to save tools adjustment programs on the memory card, touch screen, silent machine (less than 70dB), fully hydraulic, with 100 storable production programs, with or without nozzle static mixer, injection volume comprised of 4 to 15cm³ injection pressure for the material 815 comprised of the 2.035bar injection piston diameter of 10 to 18mm, equipped with temperature controller, control injection piston with a linear ruler, hydraulic and electronic device, dehumidifier, thermoregulator, 5th heating zone, air blower, cooling ring tab branches, with installed capacity	Resolution No. 14 of February 19, 2020	0	31/12/2021

8477.20.10	Ex 266	Extruders automatic pharmaceutical spindles continuous twin hot melt, extrusion and granulation, with nominal capacity for compounds of granulation twin screws with screw diameter of, equipped with heating zones, with degree of protection IP65 and cooling, vacuum water pump, gravimetric dosing of powder, volumetric feeder liquids equipped with peristaltic pump, fluid injection nozzles, feeding channel subdivided wall, pressure fusing apparatus (melt pressure) capable of performing extrusion and formation films, as well as granulation	Resolution No. 14 of February 19, 2020	0	31/12/2021
8477.20.10	Ex 267	Combinations of machines for the production of stretchable film (stretch film) by the system "cast" extrusion, with a net film width up to 3,000 mm, thickness of 10 to 40micras film, and no coils cartridge with varying width of the coils 430 to 750mm and weighing 2.5 to 50 kg; with net production capacity of up to 2.280kg / h, and line speed of up to 700m / min, varying depending on the thickness and film produced therefrom; with the film thickness tolerance up to 3.5% is produced; consisting of: 5 extruders with the screw configuration A / B / C / D / E 135/135/90/90 / 90mm diameter with high precision gravimetric feeders to feed each set of screw / barrel; "Feedblock" of 7 layers; automatic flat matrix; units "chill rolls" or "chiller roll", which primary cooler roll with a diameter of 1.400mm and secondary cooler roller 350mm; ultrasonic system for measuring film thickness;	Resolution No. 14 of February 19, 2020	0	31/12/2021
8477.20.90	Ex 117	Machine type balloon co-extrusion, for producing films barrier layer 9 with a maximum capacity of 1.590kg / h, maximum width of 2200 mm film, maximum work speed of 150m / min, the maximum diameter of coil 1200 mm, equipped with: system "TURBOCLEAN" to automatic exchange of raw materials; 8 universal screw type extruders 1 and HPS PSA extruder screw type for processing high melt index resins; automation system format change; central system of command and control; Automated system for the quick cleaning of extruders and extrusion tools; system "Profile Booster" to speed up the adjustment of thickness of the films; thickness measurement system with radioactive probe; double set of corona treatment; double winding contact or slotted; circular array of 550mm; internal cooling system and external balloon; system assembly and gravimetric	Resolution No. 14 of February 19, 2020	0	31/12/2021
8477.30.90	Ex 081	Machines for molding by blowing, thermoplastic packaging for the filling process hot pasteurized (95 ° C), up to 2 wells for thread with a maximum diameter of 110mm, maximum length 150mm and maximum capacity 4L, equipped system with 2 independent blowing stages for the heat treatment of the bottle surface with automatic feeding system and extraction.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8477.80.90	Ex 563	Automatic production of flexible bags of the type machines "box pouch" from laminated plastics film coils, printed or not, on the dimensions of 140 to 700mm in height of the "box pouch" 80 to 380 mm of width "box pouch", 25 to 70mm lateral concertina opening of the "box pouch" (the base) of 25 to 70 mm bottom width of opening of the "box pouch", equipped with: 1 primary unwinder for making the front face, bottom and back face of the "pouch box"; Unwinders for making two transverse lateral bellows; 2 unwinders for placing auxiliaries and Velcro zipper; ability to work on one track or two production runs; System 4 laser beams (one pair on each side) to half-cutting "pouch box" prepared with plastic film laminates.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8477.80.90	Ex 564	Machine for sealing polypropylene sheet - PP, for thermofusion, for plates with a width between 600 and 1500 mm and a thickness of between 2 and 5mm with two sealing units (VAME) with two heaters, mixer, modulator and thickness gauge two motorized belts for continuously moving the plate during the sealing process, electrical panel for controlling the temperatures and the speed of the belts, with capacity of up to 8m / min.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8477.80.90	Ex 565	Type multilayer coextrusion heads "flat die" for use in extruders for making rigid plastic blades with coextrusion block for three distinct layers, equipped with 3 sets of internal adjustment to between 2.5 to 5mm thickness and width up to 1900 mm, interchangeable insert for exchange sequence of layers, with maximum extrusion capacity of 600kg / h PP.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8477.80.90	Ex 566	Machines for wrapping and folding TPO (Thermoplastic Olefin - olefin thermoplastic elastomer) on top automotive front door, comprising a fan 60Hz 380V 2.6A, hot air blower resistance 9.900W 15,8A 380V, 350W 22V 30W halogen lamp 16A, three-phase power supply, 380V, 60HZ, 60A with or without interlocking machine having electric optical photo sensor 64 and 72 axes match and PLC switch operating command, upper jig front right door and feedback the top of the left front door.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8477.80.90	Ex 567	Machines for wrapping and folding TPO (Thermoplastic Olefin - olefin thermoplastic elastomer) on top automotive rear door, fitted with fan 60Hz 380V 2.6A, hot air blower resistance 9900W 15.8A 380V, 22V 30W 350W halogen lamps 16A, source three-phase power, 380V, 60HZ, 60A with or without interlocking machine having electric optical photo sensor 64 and 72 axes, start switch and operating control PLC top of the feedback from the right rear door and feedback part upper left rear door.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8477.80.90	Ex 568	Machines for heat treatment and crystallization of plastic preforms neck screw up to 113mm in diameter and capacity of up to 4L, intended for the filling process hot pasteurized (95 degrees Celsius) and prepared for the use of metal caps, fitted power system and output rotating media in a ventilated tunnel, crystallization ability to 2.000unidades / h.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.10.90	Ex 075	laminating Coating Machinery / lamination with double lamination / coating to the front and back of the fabric, automatic tracking system for coating printed films with two-sided printing, double system of screw / barrel with 95mm and L / D ratio 33: 1 with dual array, double set of unwinding for printed films, double set of unwinding not laminated material, double calender lamination with silicone rollers, double system of gear pump for mass pressure control threads alignment system for input and output of the fabric, maximum production speed of 236m / min range width of the material 200 to 800mm wide range of lamination of 0.012 to 0.05 mm.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.20.00	Ex 036	Combinations machines for performing the glycerolysis process continues composed of: 3 batch reactors in vertical cylindrical tank with domed ends shaped (elliptical, ratio 2: 1) working at temperatures up to 220 degrees Celsius; 3 heat exchangers and tube type hull sized to circulate the heat transfer fluid to 280 degrees Celsius; 3 heat exchangers and tube type hull sized to cool the product 207 to 100 degrees Celsius; 1 with the heat exchanger shell and tube type (double) sized to carry the recycling process heat through the product outlet 220 of the cooling to 92 ° C is 65 to heat the incoming product to 180 degrees Celsius; 1 heat exchanger tube type hull and dimensioned to heat the incoming oil 120-220 degrees Celsius using thermal fluid at 280 degrees Celsius; 1 heat exchanger type shell and tube dimensioned	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.82.10	Ex 242	solids mixers and liquids for the production of thermoplastic compounds (masterbatch) with detachable tapered containers to avoid contamination of the color, movable on wheels, with a double wall for cooling and made of stainless steel, with a total volume within the range of 150 to 2000 liters , production capacity in the range of 60 to 800g / load with motorization in the range of 11 to 90 kW, exhaust system truck, exhaust system and the touch panel (touchscreen) with programmable logic controller (PLC) and frequency converter .	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.82.10	Ex 243	Mixers made of stainless steel with electric excitement of plastic bags for biotechnological processes, with a maximum nominal net working volume of up to 2.000L, with stirring speed of 20 to 356rpm, with operator control screen type touch panel " touchscreen "with sensors and pinch valves, load cells, heating and cooling system dedicated to maintain the fluid between 2 and 40 degrees Celsius.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.82.10	Ex 244	industrial vertical agitator assembly procedure in hot water, to liquefaction process in ethanol production step from maize, weighing 1.820kg, downforce applied to the 17.800N with dynamic torque to 14.700Nm, dynamic variable time up to 7.690Nm mounted on shaft 120mm, two-bladed impellers 6, drive motor 7,5HP and 1,800 rpm, 440V, with reducing V4M - 246.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.82.10	Ex 245	industrial vertical mounting mixers in hot process water, to liquefaction process in ethanol production step from corn, mounted on shaft 102mm and spindle speed of 41rpm, has an axial impeller of four blades and impeller two radial blades 25HP drive motor, rotation 1.800rpm, 440V voltage.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.82.10	Ex 246	industrial vertical agitator assembly procedure in hot water, to liquefaction process in manufacture of ethanol from corn step, 140mm mounted on shaft and shaft speed 4,4rpm, radial impellers 7 of two blades, two vertical blades, the drive motor 10HP, rotation 1.800rpm, 440V voltage.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8479.82.10	Ex 247	Reactors for homogenizing, emulsifying and stir liquid materials and semi-solids for the manufacture of cosmetic and pharmaceutical products with wide viscosity range; emulsions with distribution of 50% resulting in particles / droplets less than 0.76 microns; conical bottom that lets you work with a minimum volume of 50 L vessel, product recirculation system, maximum volume 2.000L vessel, built in 316L stainless steel; with stirrer anchor-shaped, with mixing paddles in the vertical direction (drawing CIP) provided with lateral scrapers PTFE, vessel equipped with double jacket for heating and cooling the product, with positive and negative pressure system, automatic lid opening through mechanical system, weight control, load cells, product temperature control, vacuum system with a vacuum pump of liquid ring to prevent foam product and the CIP cleaning system (clean in Place) with	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.82.90	Ex 183	Crushers combined forest waste, furniture or mats mounted on tires, weighing not less than 46.000kg, equipped with pre crusher and crusher system high speed on the same machine; diesel engine with a power exceeding 650HP; pre crushing rotor 42 equipped with teeth, length 3,000 mm, diameter 600 mm; crushing rotor hammers weight above 2,500 kg, a width of 1.750mm, 1.100mm diameter; sieve classification with ferrous separator between the pre crusher and crusher; central automatic lubrication; chassis with folding conveyor belt automatic lubrication; Folding frame with integrated conveyor for discharge of crushed material with ferrous separator mounted on the belt; command via remote control or directly on the programmable logic control panel (PLC) integrated, which has operating routines	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.11	Ex 155	pressing automatic presses automotive brake guide device ESC type (Control Electronic stability) with programmable logic controller (PLC), operating interface via remote access server called Terminal Server (TS) and supervisory system called "Cell Computer" consisting of: one pressing station, pneumatic cylinder 1 with a total travel of up to 60mm and pressing force of 1,178N to tightly control by load cell and ongoing control operation by sensor, with RBC calibration station 1 automatic monitoring of the pressing force analysis via guide device and of course with automatic segregation to nonconforming product, automatic systems to check the presence of the before pressing guide device, automatic loading pallet with the sync block of sensors, one station pallet transfer with the valve block during the pressing process performed by linear motors, servos, one load cell extra 10kN interface for frequency amplifier and pressing tool for the guide device.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.11	Ex 156	automatic compression rotary machines with free rotation of 360 degrees, for the manufacture of pharmaceutical tablets by a punch compression segments capable of processing compressed single or double layer by means of automatic rotary filling wheel with the possibility of automatic compression small amounts and direct extrapolation of mono- and double-layer tablets, with a production capacity of 135,000 and 1.080.000 comprimidos / h force in the areas of precompression and compression 100kN, can operate with interchangeable rotors with 75 punches for manufacturing stations tablets maximum dimensions of 18 x 8.5 mm (diameter x thickness), the rotor diameter 680mm, maximum depth 25mm segment, tooling support consisting of upper and lower punches and EU19 type FS19, punch body diameter of 19mm,	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 925	Double washing machines with free heights of 2.3 and 2.5m washing equipped with frequency inverters 4, consisting of two porticoes with photocells barrier for profile detection of any type of vehicle including trucks, vehicles with "Saint Antonio "and maritime top down, sirens and roof racks, with high-pressure kit on wheels, side and horizontal with car profile contour with horizontal drying that surrounds the car's profile with stainless steel blade with two electric fans tilting each of 5,5kW in three positions with wash wheel brush or brushless optional that consists of three rotating high pressure jets that strike the entire surface of the tire, the inner part of the wheel housing and the fender with or without the optional rinsing bottom of the chassis at high pressure with rotary heads, with or without optional unique brushes oscillating movements that simulate washing	Resolution No. 14 of February 19, 2020	0	31/12/2021

8479.89.99	Ex 926	compact hydraulic units with integrated frequency inverter with "firmware" specific to oil-hydraulic applications, equipped with USB interface and connections to the main protocols of industrial networks; interface through digital and analog signals with predefined functions to enable and disable operation, pressure control / flow with automatic speed adjustment to adjust as oil demand to reduce energy consumption; with maximum flow of 35L / min, maximum working pressure of 240bar, power comprised between 1.5 to 4 kW, voltage of 380 to 480V, maximum noise level of 75dB, the cooling system for the motor and fluid and to 2kW " LED "fault indicator, suitable for industrial applications.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 927	Machines for processing of soap in small scale bar for pre-production laboratory tests in a single block, with a production capacity of up to 100kg / h, equipped with: mixer thumbnail simple beater extruder single screw manual cutter and press.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 928	Semiautomatic machines powder filling capsules in various sizes (# 000, # 00, # 0, # 1-4); operating voltage to 220V three-phase network and frequency 50Hz; with mechanical and electro operating system.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 929	Air arrangements for closing emergency, used in water or sewage treatment plant, equipped with a control panel, four pneumatic actuators closing fast up to 5s for closing two batteries with two cylinders with 900kg capacity each.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 930	continuous assembly machinery heat exchangers hives for motor vehicles, complete machine, with 65colmeias production capacity / h, provided with: automatic loading pipe system, the pipes rolling device for forming the matrix (honeycomb) with fins, drive device mounting table, cradles for manual feed of the side plates and the collectors, with automatic table for the hive assembly.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 931	Machines for assembling and automatic adjustment of internal components of diesel fuel injectors of the "common rail", with approximate automation level of 90%; capable of: measuring the internal distance of the whole experimental group to define the value of current microns; calculating the thickness adjustment disk for insertion into the experimental group; check the misalignment of the armature plate in relation to the armature disk; 3 provided with probes for probing with 0.1 micron resolution at 120 degrees distance measuring circle diameter of 15 ± 0.1 mm for distance between two positions of the armature plate; together with measuring forces mounted on four poles with different values ranging from 0.3 to 250N.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 932	Portable or soil spraying with pressurized manual or compressed air, plastic or carbon steel plate, reservoir up to 100L, with an operating pressure of 10 to 300psi with seal "Viton" or NBR, with or without: Regulator pressure trigger and hose.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 933	Device hydraulic cutting lines / electrical carbon steel, SDSS 25 Cr, 13 Cr or nickel alloy SMSS, cutting lines to 8 hydraulic / electric, for pressures between 0 and 7,500psi and temperatures between 4 and 125 degrees Celsius, for use in oil wells.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 934	Additive manufacturing machines for 3D printing metal fusion selective laser metal powder layer by laser YTTERBIO with 400W and wavelength of 1,060 to 1.100nm, with lenses "f-theta" for automatic correction of focus, with platform production of 250 x 250 x 325mm, very generation system with nitrogen, argon or nitrogen gas flushing chamber by nitrogen, recirculation system for self-cleaning filters, glass scale for axis z motion control, with less than or equal repeatability $\pm 0,005$ mm, for production of parts in titanium, stainless steel, cobalt chrome, inconel, tungsten, steel, tools and copper.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 935	Combinations machines for processing of soap bars with a nominal capacity of up to 500 kg / h composed of: double sigma mixer with a capacity equal or higher than 100kg / batch with automatic unloading; single screw extruder with refining; cylinder 3 noodle laminating rollers; finishing extruder single screw with two stages; vacuum chamber; automatic cutter bars; conveyor belts; bars to press tablets by PLC controlled with heat exchanger with 17.300kcal / h cooling capacity; embrulhadeira with soap with sealing for resistance to speed up 150sabonetes / min; soaps with automatic cartoning machine for packaging folded and / or glued, to speed up 230sabonetes / min; soaps with automatic packer for packaging film BOPP or PVC, with a sealing element which is up to speed	Resolution No. 14 of February 19, 2020	0	31/12/2021

8479.89.99	Ex 936	Fully automatic wire processing machines for cutting multi-veins electrical cable (2-13) stripping internal and external coating can crimp terminals on both sides with cable processing capacity of up to 7 mm diameter, provided with panel control with touch screen; detector wireless system, terminals and air pressure; module to cut out the programmed length not less than 120mm, cut with precision of 0.5 mm; disbark module outer skin length of 30 to 160mm, internal coating disbark 0 to 8mm in length; terminal crimping module with power 2t.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 937	conformadoras fully automated electrical coils machine with electric-pneumatic operation without using hydraulic assembly controlled by the PLC, designed for opening of "loops" in the classic formats, 'coil flat' (flat coil) and trapezoidal, consisting of two sets installed in welded profiled structure, each having: car with the edge clamp, rear arm with grippers for the straight part of the coil, the front claw arm to the straight part of the coil, arcuate tooling together to shape the curve of the coil; electrical cabinet and control panel; protective barriers consist of physical fence and a light barrier; may or may not contain specific tooling sets for: final clips, staples groove part, including end grip removable and exchangeable pins, straight portion of the claw ray formation, gripper devices for locking the involute portion (curve) and molds	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 938	Combinations of machines intended for the biological treatment of effluents previously treated with nominal flow of the effluent 6.568m ³ / h maximum hydraulic flow 7.173m ³ / h for mounting in concrete tanks 2, composed of: air diffusion system constructed in stainless steel; fine bubble diffuser type membrane made of rubber / silicone mounted "grids" of stainless steel aeration and fed by special rubber hoses; three automatic equipment for separating and removing suspended solids 70m in diameter equipped suction arms in which the settled activated sludge is collected.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 939	Combinations of machines for removal of COD in wastewater, with nominal capacity of 6.488m ³ / h maximum hydraulic flow 7.068m ³ / h for receiving wastewater containing COD load 260mg / L, composed of: automatic equipment mixers (from Flocculators) ; Automatic equipment DAF (Dissolved Air Flotadores) and their accessories for COD removal, to ensure 190mgDQO COD / l; 3 flocculation units, where mixers are installed, one in each chamber; a static mixer in the pipe between flocculation and DAF unit; 3 floaters units dissolved air (DAF), where the combination of scrapers and bottom surface; dispersion chamber; drive mechanism; Well float; floating tray; structure of the floating tray; retraction grid for scraper; arms and support beams; and walkway.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.89.99	Ex 940	Marking machines and test matrices and thermoplastic injection molds capable of pressing, suspend, open and turn the dies and molds, equipped with fixed and remote control panel for safety and operation, anti-fall device, maximum capacity of 300t equipped with two tables, an upper swivel 180 degrees and the other for lower sliding movements in the horizontal direction, both sizes of 3000 x 2200 mm, capacity up to 100t mold open time to 2.300mm, 500mm stroke reversal angle 180 degrees descending speed 120mm / s velocity pressure 15 5 mm / s, increasing speed 120mm / sec, the unit value (CIF) not exceeding US \$ 1,249,534.20.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.90.90	Ex 306	Mechanisms of rotation of photovoltaic panels, for exclusive use in solar an axis followers (trackers) able to rotate rows of 90 photovoltaic panels maximum rotational range of up to 120 (± 60) and maximum torque ± 300 Nm, resistance grounding between the collar and the flange of the smaller base than 0.1 ohm DC current in 25A, according to UL2703 standard, which ensures shielding mechanism operation for 30 years without requiring maintenance, and galvanized hot with a minimum thickness of 35micrometros as standard GB 13912-2002.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.90.90	Ex 307	Fasteners and thermal expansion of the torque tube of photovoltaic panels, for exclusive use in solar trackers an axis (trackers), designed to withstand winds up to 130 mph (209km / h) and the maximum thermal expansion of up to 35mm tube, and subjected to surface treatment layer of at least 18 microns zinc.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8479.90.90	Ex 308	cylinder handlers to assist in the removal and safe handling of large hydraulic cylinders (lift cylinders and front suspension and / or rear) of heavy machinery and vehicles, containing steel cords with adjustable tension, telescopic arm to reach adjustment, quick hitch "quick-hitch" for connecting multiple devices with tilting edge, and secure loading capacity of 2,000 kg at maximum reach.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8479.90.90	Ex 309	Device (JIG) for positioning / support, suitable for printed circuit boards mounted or batteries, or electrical / electronic components or parts of cellular phone or "tablet" or mobile device or "tablet" mounted, made of plastic and / or metal, and may contain, pneumatic mechanism, covers, inserts, attachments, used as a guide in an electronic apparatus assembly process, part of electronic device assembly equipment.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8480.71.00	Ex 181	bipartite molds with or without sliding table with fastening clamps of the raw material for molding automotive instrument panel TPO (Thermoplastic Olefin - thermoplastic olefin elastomer), by electro-forming and compressing process (vacuum mold) measuring the concave side 1,004 x 1.250 x 413mm and the convex side 1,004 x 1,250 x 295mm, process temperature between 80 and 150 degrees Celsius and containing in their body limit switch, ejector air cylinder connector (housing), check valve, safety valve, temperature controller, vacuum gauge, terminal box, air pipes, mold ejector cylinder, clamps and pressure gauges.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8480.71.00	Ex 182	Kits (kits) custom male made of steel and / or steel / carbon to injection mold preforms of polyethylene terephthalate (PET), composed de132 injection males, 132 injection males tubes and 132anéis injection males of unit value (CIF) not exceeding US \$ 368,167.81.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8481.40.00	Ex 029	Safety valves 2.800pol, 410-13Cr / 4140/4130 high strength with personalized butterfly mechanism 450 and MP35N alloy high strength, EN 6kpsi 0,049pol ² hydraulic chamber and components in contact with the flow 9CR [80], 13Cr [80], 90 elastomers.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8481.80.92	Ex 038	Solenoid valve with PWM system (pulse width modulation) type 2/2 CN pathways (normally closed) to flow 3L / min flow factor Kz 0.14 with IP67 protection protocol and maximum pressure working 12bar, used in agricultural sprayers.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8481.80.99	Ex 095	Safety valves, aluminum, or not reconnectable reconnectable to steam recovery or not, input connection and output 1/2 to 2 inches, with a maximum free flow 500L / min.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8481.90.90	Ex 054	electromechanical devices operated in voltage value from 110 to 240Vac with plastic housing and equipped internally with movable piston extension up to 8mm and strength to 100N activated by thermal expansion / contraction of wax contained in a metal piston.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8483.40.10	Ex 303	Gear Boxes for multiplication rotation and torque transmission for application in wind turbines with a planetary stage and two-stage parallel with 17,9rpm rated speed input, a speed multiplication ratio of 1: 79.895, oil capacity to 350L, with nominal torque 1.691kNm input and rated mechanical power 1.874kW maximum dimensions of 2.279 x 2.255 x 1.595mm, maximum weight of 14.433kg, maximum noise 101dB.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8483.40.10	Ex 304	Gear Boxes with aluminum housing, between 1.6 and 2,1kW power, input rotation between 7,000 and 9.000rpm and reduction ratio of 1.4: 1 implemented in hand-operated tools did not self-propelled type trimmers.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8483.40.90	Ex 210	Steel gears responsible for transmitting rotation and torque of an electric motor shaft to a spindle of steel, equipped with a pinion and a crown bevel gear type helical or inclined straight, with transmission angular shape through the drive shaft movement and lagged second axis at an angle of 90 degrees, mounting height of between 9 and 30mm, gear module between 0.80 and 1.7, used in electrical hand tools.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8483.40.90	Ex 211	the pinion shaft steel gears for motion transmission and torque between the spindle motor and the tool holder, with spur gear machined in the body, with accuracy class and standard quality equal to 9, outer diameter of the teeth of 14,423 mm, shaft length of 74,8mm and gear length 18mm, used in electrical hand tools.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8501.52.90	Ex 017	Aerostatic bearings with direct drive, equipped with synchronous motor "encoder" with rotary 2.048pulsos, maximum speed up to 6.000rpm, maximum torque of up to 5 Nm, maximum current up to 9,7A, radial and axial runout 0.05 and 0 , 1 micron respectively.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8501.52.90	Ex 018	Motofusos for machining ferrous and non-ferrous products with tool holder, equipped with synchronous and asynchronous drives, maximum speeds between 10,000 and 30.000L / min, power from 40 to 75kW, torque from 30 to 298Nm, external diameter between 190 and 250mm, 1 or two channels for the cooling-lubro connection with maximum pressure of 80bar interface for tools HSK63 cones HSK100, with connection to the temperature sensor.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8501.52.90	Ex 019	Linear motors fast "fasttool" used in equipment for machining ophthalmic surfaces, equipped with mechanical stroke of 30mm, a cutoff frequency of 400Hz, maximum speed up to 5.5 m / s maximum acceleration of up to 1,000 m / s ² , capable of reaches a peak power period and 1.379N to range from 4 microns.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8501.52.90	Ex 020	AC servomotors, synchronous with rotor permanent magnets, with natural cooling, forced refrigerated water or with rated speeds between 1,500 to 6.000rpm, rated powers from 0.05 to 34,2kW, static torques from 0.18 to 125nm, shaft height from 20 to 100 mm, noise level between 55 to 70dB, degree of protection up to IP67, voltage levels up to 480VAC, equipped with encoders with a resolution of at least 24 bits to interface with other electronic devices such as controls numeric used in the manufacture of machining centers.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8501.64.00	Ex 004	Alternating current generators of the type DFIG (doubly fed induction) with 6.000V voltage, maximum continuous speed 1.517rpm, equipped with magnetic stator core laminations formed of metal of low carbon silicon steel; coils formed by individually insulated copper wires; the rotor comprising a shaft made of carbon steel normalized, cooled air; connection rotor-stator star-like star; Cooling system type IC-21 with internal air flow [m ³ / s] 4 (a 1.444rpm) and an operating temperature of -30 degrees Celsius to less than or equal to 45 degrees Celsius; corrosion protection C4 / H according to ISO 12944 standard; IP34 protection against dust factor; Maximum secondary voltage 825V in the rotor; Maximum rated current of 580A (rms); maximum secondary current of 2.200A (rms); The vibration 1.5mm / s rms; 40.600Nm nominal torque.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8503.00.90	Ex 027	ballast chamber comprising two ends polyurethane interconnected by web material of glass fiber and epoxy resin composite inner tube and PVC, with a view to adding to the polyurethane mass balancing weight ranging from 0.1 to 10, 5kg, height between 0.1 and 324 mm, width between 0.1 and 501mm and a length between 0.1 and 1200 mm delimited exclusively for wind blades.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8503.00.90	Ex 028	rotor and stator assemblies to package / thickness of (20 to 70mm) for making asynchronous motors with air cooling, power of 120 to 552W, frequency 50 or 60Hz, the 1.800rpm.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.30	Ex 015	DC Power Converters elevator door control, 110 / 220V voltage to 24 volts, with a current 2 x 2.5 amps and power 120W.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.50	Ex 002	electronic frequency converters for variable speed electric motor with servo amplifier with optical fiber communication interface FSSB type with dynamic braking module, DC 24V, with a voltage power supply 400Vac (3-) with continuous output of 60kW, 70kW maximum output and peak output of 180 kW.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.50	Ex 003	electronic frequency inverters for variable speed electrical power permanent magnet motors up to 2.2kW for traction elevators, with interface for configuring keyboard using RS-485 communication, internal programmable logic (PLC), three-phase output to the motor min 200V and maximum 240V at frequency of 50 to 60Hz with a maximum 11A current output to brake resistor connection to expansion module encoder, single phase input of at least 200V and a maximum of 240V at least 12 digital inputs and three inputs analog, CAN communication port, IP20 degree of protection, unit value (CIF) not exceeding R \$ 1205.08.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 057	Inverter current to direct current conversion ac 2 levels, DC / AC, bipolar modulation and H-bridge topology, the power range 8.100W maximum peak and the maximum input voltage of 600Vdc up with a minimum input voltage 100Vdc, operating temperature of -25 to 60 degrees Celsius, with an efficiency of at least 97.2%, 32A maximum output current and the maximum rated output until 7,7KVA.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 058	Modules power static converter with AC input 85 to 305V DC or 100 to 430VDC and 167mA output current, + 12V output and maximum output of 2W output with overcurrent protection, overvoltage and short output circuit 74 efficiency % at full load, "ripple" of 150mvpp maximum output voltage, operating temperature of -25 to 85 degrees Celsius.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 059	static power converters 2 levels, DC / AC, bipolar modulation and H-bridge topology, 100Vdc Vmin, Vmax VSTART and 125VDC 600Vdc Ica max 32A, Smax 7,68KVA, F / C, 240Vac.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8504.40.90	Ex 060	Inverters for photovoltaic energy systems (solar), single phase connected to the network "on-grid", performing DC conversion into alternating current in the power range of DC 5880 to 8.100W, working with maximum operating DC voltage of 550V, until the starting voltage 100V, provided up to two charge controllers (MPPT) control to 1 "strings" by MPPT with surge protection device (SPD type II on the DC side, the maximum efficiency 98.4% with the scaling factor inverter (overhead) up to 140%, IP65 screen "display" LCD, operating temperature of -25 to 60 degrees Celsius disconnecter integrated continuous current, nominal output voltage alternating current to 300Vca, frequency of 50 / 60Hz, adjustable power factor (0.8 to 1 capacitive or inductive), and may contain interfaces RS485 / USB / Wi-Fi / 4G / RF.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 061	Inverters for photovoltaic energy systems (solar), mono or two-phase connected to the network "on-grid", performing DC conversion into alternating current with maximum power at recommended DC 10.500W, working with maximum operating DC voltage of 550V, starting voltage up to 100V, equipped with up to 2 charge controllers (MPPT) control up to 2 "strings" input, minimum efficiency of 98.4%, natural cooling system, IP65 protection, screen "display" LCD, operating temperature of -25 to 60 degrees Celsius disconnecter integrated into direct current (DC switch), the nominal output AC voltage of up 280Vca, frequency of 50 / 60Hz, adjustable power factor (0, 8-1 inductive or capacitive), and may contain RS485 / RS232 / WIFI / GPRS / 4G / LAN / FR.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 062	Inverters for photovoltaic energy systems (solar), mono or two-phase connected to the network "on-grid", performing DC conversion into alternating current in the power range from 3.900 to 6.500W, working with maximum operating voltage in DC 550V, starting voltage up to 100V, equipped with up to 2 charge controllers (MPPT) control up to 2 "strings" input each, 97.6% efficiency at least natural cooling system, IP65 protection, screen "display" LCD, operating temperature of -25 to 60 degrees Celsius disconnecter integrated into direct current (DC switch) AC rated output voltage of up to 240V ac, frequency of 50 / 60Hz, adjustable power factor (0, 8-1 inductive or capacitive), and may contain RS232 / RF / Wi-Fi / LAN / GPRS.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 063	phase frequency inverter type "on-grid" with nominal power output of 60.000W topology without transformer with forced cooling (fans) with cc key with operating temperature from -25 to 60 degrees Celsius maximum input voltage for "strings" of 1.000V and minimum drive voltage 200 ~ 25V, equipment provided with three MPPT (s) with 4 input (s) and by MPPT maximum input current in each MPPT 40A. nominal output voltage for mains 380V, the output frequency of 50/60 (+ 5%), maximum output current output 95 of the power factor of 0.8 (late) ~ 0.8 (early) with less than 3% harmonic distortion maximum efficiency 98.6% protection system composed of leakage current (aC) ground fault protection, anti-islanding protection, overvoltage protection (cc), overload protection (cc) overload protection (CA), reversal protection	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 064	Inverter for photovoltaic application, three-phase, assigned to 75.000W or rated power and the maximum input power into direct current (DC) up 112.500W with one maximum power point inputs (MPP) 1 entrance and independent "string" MPP, maximum input current to direct current (dc) of 140A, environmental condition class according IEC60721-3-4 K4H / 4Z4 / 4B2 / AS3 / 4M2 / 4C2 typical 58dB noise emission, the lower self-consumption night 3W and no "string" integrated box.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 065	Inverter for photovoltaic application, AC, for mounting on the ground of assigned or 50.000W rated power and the maximum input power into direct current (DC) up 75.000W with minimum input voltage 150V continuous current, with 6 maximum power input point (MPP) and 2 independent entries "string" MPP, environmental condition class 4K4H according IEC60721-3-4, which lower sound emission 65dB typical, self-consumption of night 4,8W equipped with "SUNCLIX" for cable connection in DC, Wi-Fi communication included and rainwater drainage system for use at the time.	Resolution No. 14 of February 19, 2020	0	31/12/2021

8504.40.90	Ex 066	Three-phase inverter frequency "on-grid" with 15.000W power without transformer topology, with passive cooling method (no fans) and hybrid (sinks + fans) with intelligent control, operating temperature of -25 to 60 degrees Celsius LCD for operation, weight 58.2 to 63kg, providing IP65 (protection against dust and water jets) and lower operating noise 30db, RS 485 communication ports and Wi-Fi stick, models with 2 trackers maximum power point (MPPT) and maximum input 1000 1.100V direct current, efficiency between 97 to 98.1%, with a minimum current input voltage of 200Vdc continues with output range at AC 160 at 285Vac, with a nominal voltage of 220 to 240Vac, with operation at 50/60 Hz power factor and supplying on one option to change, meeting the standards IEC62109-1 / -2, AS3100, EN61000-6-1, EN61000-6-3	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 067	three phase inverters for photovoltaic energy systems (solar) connected to the network "on-grid", performing DC conversion into alternating current in the power range of 25,000 and power management delivered to the grid, working with maximum operating DC voltage of 1.000Vcc and 580Vcc starting voltage, provided with: one (1) maximum power point slave device (SPMP) controlling up to six "strings" input with the scaling factor inverter (overload) 140-150 % active cooling system (cooler by forced ventilation), IP66 degree of protection, LCD display, operating temperature of -25 to 60 degrees Celsius disconnecter integrated continuous current, lightning protection (DPS) type 1 + 2 direct current and integrated fuse holder, integrated Wi-fi communication, API interface and Modbus communication protocol (TCP or RTU), inputs and outputs	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 068	Inverters "strings" AC for photovoltaic application "range" of between 30 and 50kW power to DC voltage conversion produced by photovoltaic arrays to AC voltage for feeding the loads and synchronizing with the utility grid voltage of 220V AC at 60Hz.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 069	Three-phase inverter frequency "on-grid" with 30.000W power without transformer topology, with passive cooling method (no fans) and hybrid (sinks + fans) with intelligent control, operating temperature of -25 to 60 degrees Celsius LCD for operation, weight 58.2 to 63kg, providing IP65 (protection against dust and water jets) and lower operating noise 30db, communication ports RS 485 and "Wi-Fi stick" models 2 trackers maximum power point (MPPT) and maximum input 1000 1.100V direct current, efficiency between 97 to 98.1%, with a minimum current input voltage of 200Vdc continues with output alternating current range 160 to 285Vac, with a nominal voltage of 220 to 240Vac, with operation at 50/60 Hz power factor and supplying on one option to change, meeting the standards IEC62109-1 / -2, AS3100, EN61000-6-1, EN61000-6-3,	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 070	three phase inverters for photovoltaic energy systems (solar) connected to the network "on-grid", performing DC conversion into alternating current in the power range from 27.000W and management of energy delivered to the grid, working with maximum operating voltage current continuous 1.000Vcc and 580Vcc starting voltage, provided with: one (1) maximum power point slave device (SPMP) controlling up to six "strings" input with the scaling factor inverter (overhead) 140 to 150% active cooling system (cooler by forced ventilation), IP66 degree of protection, LCD display, operating temperature of -25 to 60 degrees Celsius disconnecter integrated continuous current, lightning protection (DPS) type 1+ 2 into direct current and integrated fuse, integrated Wi-Fi communication interface API and Modbus communication protocol (TCP or RTU), inputs and outputs	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 071	three phase inverters for photovoltaic energy systems (solar) connected to the network "on-grid", performing DC conversion into alternating current in the power range from 12,500 to 20.000W and management of energy delivered to the grid, working with maximum operating voltage 1.000Vcc in DC and starting voltage 200Vcc, equipped with: two (2) followers of the maximum power point (SPMP) controlling up to three (3) "strings" input each, and inverter sizing factor (overhead) of 150% active cooling systems (forced ventilation), IP66 degree of protection, LCD display, operating temperature of -40 to 60 degrees Celsius disconnecter integrated into direct current, integrated communication via WiFi system interface API and Modbus communication protocol (TCP or RTU), digital inputs and outputs (IOs) to configurable power management, rated output voltage alternating current	Resolution No. 14 of February 19, 2020	0	31/12/2021

8504.40.90	Ex 072	three phase inverters for photovoltaic energy systems (solar) connected to the network "on-grid", performing DC conversion into alternating current in the power range from 10,000 to 15.000W and power management delivered to the grid, working with maximum operating voltage direct current in the range of 600 to 1.000Vcc and starting the voltage 200Vcc 360Vcc, equipped with: 1 or 2 followers of the maximum power point (SPMP), controlling or 6-3 "strings" input each scaling factor the inverter (overload) 140-150%, active cooling systems (forced ventilation), IP66 degree of protection, LCD display, operating temperature of -40 to 60 degrees Celsius, current disconnecter integrated continuous, and may contain protection against lightning (DPS) Type 1 + 2 dc and integrated fuse, integrated communication via WiFi system API interface and communication protocol	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.40.90	Ex 073	Inverter for photovoltaic application, three-phase, the nominal power assigned or from 15.000 to 25.000W and the maximum input power into direct current (dc) up 45.000W with a minimum input voltage 150V continuous current, with 2 inputs point maximum power (MPP) and 3 independent inputs "string" MPP, environmental condition class 4K4H according IEC60721-3-4, typical noise emission 51dB, selfconsumption overnight 1W equipped with "SUNCLIX" for connecting cables current continuous, and reactive power injection function (Q on Demand 24/7), the unit value (CIF) not exceeding R \$ 3192.91.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.90.40	Ex 004	disconnecting tetrahydro polar keys, 4P + 4P type, used in continuous current of up to 1.800A in 1.500Vdc with screw fixing the base mounting with unique static converters photovoltaic power generation.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.90.40	Ex 005	Breakers open box type, tripolar, with drives and motor protection, coupled with protection relay, with standard assembly and "Front" of input and output busses, with capacity of 1.600A at 690Vac, with UL, for exclusive mount static converters for photovoltaic power generation.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8504.90.40	Ex 006	Modular cabinets and flexible power conditioning system compatible with VLRA batteries and lithium-ion, suitable for data processing systems (data centers) with dual power (Dual Feed) without transformer, without built-in batteries, developed the technology to replacement modules and batteries without shutdown (Hot-Swappable) containing static switch modules, superior exhaustion, ongoing management friendly energy consumption through graphical interface available in LCD screen (liquid crystal display) integrated, with support for optional communication cards that enable remote access, may contain from 4 to 10 modules with a nominal power of 20 kW power input and voltage output and AC 208 or 220V.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8514.10.10	Ex 097	industrial electric furnaces high pressure, semi-automatic, with vacuum lock chamber quenching gas for the surface treatment of tools and functional parts of lower links with preheating steel, neutral thermal treatment and treatment of carburizing low pressure loads up 4t, controlled with a remote control software with integrated processes recording data, with useful size of 1,000 x 1,000 x 1,500 mm, 420kW engine (Overdrive 630 kW) and gross weight of the load 4.000kg.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8514.40.00	Ex 012	Functional heat treatment units (heating / cooling) by dielectric induction, for compression molding or injection molding, comprising: power induction generators 25 or 50 or 100 or 150 or 200 or 300, cooling units closed, hydraulic and interface controllers interfaces.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8515.21.00	Ex 191	functional for making the internal reinforcement of the left side or right body units composite automotive vehicles: one or more robots for welding strength with maximum load capacity exceeding 50kg and 5 or more degrees of freedom panel with control by robot, with portable programming unit by robot, with welding clamp transformer by robot, with welding parameters for robot controller, with or without dresser electrodes by robot, with or without a robot mounting base; One or more robots to handle parts with maximum load capacity not exceeding 50 kg and 5 or more degrees of freedom, with robot-control panel with portable programming unit for robot with claw handling parts by robot; One or more supports for positioning pieces; with a device for locking and positioning the internal side reinforcement of 1 or more compound of Cartesian robots with	Resolution No. 14 of February 19, 2020	0	31/12/2021

8515.21.00	Ex 192	robotised cells for welding automotive parts composed of 15 industrial robots with a carrying capacity exceeding 20 kg, comprising a mechanical arm with orbital motion of 6 or more degrees of freedom with the controller, and three robot manipulators with a device for positioning parts of the body structure 10 for the welding robots to weld gripper servo controlled transformer and weld controller, weld electrode milling point with use of the electric motor integrated welding robot; 2 robots sealant application with application gun and the ability to apply 300mm / sec., 4 of the product transfer device between cells, assisted by servo motors with supports, lifting movement and load capacity of up to 350kg longitudinally moving product between stations on rail with the use of servo motor and speed exceeding 1.5m / s for fixation devices 1	Resolution No. 14 of February 19, 2020	0	31/12/2021
8515.80.90	Ex 135	wire feeders for welding coated electrode wire drive pulley block 4 with pressure adjustment, current 500A, a first variable speed 22m / i, solid wire tensile capacity with a diameter of 0.8 to 1.6mm, cored wire with a diameter of 1 to 1.6mm and operating temperature of 40 degrees Celsius.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8543.30.90	Ex 043	Combinations of machines forming a functional unit for plating copper and chromium in steel cylinders for gravure printing, and finishing with the preparation, compared to the maximum length and maximum cylinder circumference 1.600mm 1.000mm, managed by programmable logic controller (PLC), composed of: two-cylinder loading stations 10 each stands; automatic washing unit and surface preparation (electrolytic degreasing); Copper plating unit; chromium electroplating unit; descromação unit; polishing unit copper and chromium; unit of grinding, polishing and machining of copper-plated steel drums; Automatic handling and positioning system provided with rollers rolling-bridge and its respective support structure.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8604.00.90	Ex 068	continuous action machines for leveling, aligning, lifting and sleepers punch in railways, self-propelled, mounted on railway bogies equipped with a diesel engine cooled by water power equal or superior to 324kW, temperature monitoring system of the engine compartment, cabin Sound-insulating and front window with safety glass panel of tamping with processing capability for 1 or 2 for moving sleepers, tamping system with pressure vibration with 35Hz frequency and directional, linear oscillation gauge railway and speed of 1.435mm movement equal to 72,42km / h and / or 45mph.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8604.00.90	Ex 069	regulatory machinery for distributing ballast and railway lines races with water-cooled diesel engine, wheel diameter of 730mm, 1.435mm gauge.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8609.00.00	Ex 024	rigid containers, closed type, to transport aqueous stabilized hydrogen peroxide, made of stainless steel, length of 20 feet with 4 bar of pressure and temperature from -40 to 130 degrees Celsius.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8609.00.00	Ex 025	Isotanks 20 ft transport and cryogenic storage of liquefied natural gas (LNG), the inner tank stainless steel SA-240M 304, outer tank carbon steel vacuum insulation and insulating High includes load cryogenic valves, discharge, "boil-off "and security, geometric capacity 19,2m ³ , design pressure of 0,95MPa, 0,8MPa operating pressure, design temperature of -196 degrees Celsius operating temperature greater than or equal to -162 degrees Celsius.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8609.00.00	Ex 026	Isotanks 40 feet to transport and cryogenic storage of liquefied natural gas (LNG), the inner tank stainless steel SA-240M 304, outer tank carbon steel vacuum insulation and insulating High includes load cryogenic valves, discharge, "boil-off "and security, geometric capacity 43,1m ³ , 1,95MPa design pressure, operating pressure 1.8 MPa, design temperature of -196 degrees Celsius operating temperature greater than or equal to -162 degrees Celsius .	Resolution No. 14 of February 19, 2020	0	31/12/2021
8709.11.00	Ex 029	Tugboat subway and railway vehicles and other movable rail vehicles, with traction force (push or pull) 2.200t weight up to the vehicle to be towed, driven by manual control or radio control unit, powered by batteries and pulled four independent electric motors coupled to steering and traction wheels, wheels with handling tug and empowered to rotate up to 180 independently form of degrees, allowing spin on the center itself or any direction (left or right) and capable of speeds of up to 20km /H.	Resolution No. 14 of February 19, 2020	0	31/12/2021
8907.90.00	Ex 015	fast scanning systems and oil gathering, with waters under sheltered in rivers and open sea through inflatable boom, hydraulic unit with low pressure air blower and table command, umbilical reel, hydraulic hoses, hydro system folio and oil pump with integrated collector.	Resolution No. 14 of February 19, 2020	0	31/12/2021

9014.80.10	Ex 023	for monitoring equipment and determination of volume flow rate and gas volume fraction to processing sonar arrays to capture sound and interpret the flow turbulence generated by fluid flow and the sound generated by the pipeline and process instrumentation, transmitted by one or more analog output 4 to 20mA, with pulse output, alarm output interface.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9015.30.00	Ex 006	the "software" system equipment management laser double-pending rotary system for reading of land in 2 planes gaps and different slopes endowed with: signal emitter laser double leveling pendency, with single axis slopes up to 45 degrees with adapter manual tilt with operating range of 1.300m (4.265pés), rotation of 600rpm, allowing a margin of error of +/- 1 mm at a distance of 650m; laser signal receiver 360 degrees accompanied by high luminous sensitivity, radiant and cables short response time; Control box aluminum shielded with winds control sensor control signal winds up to 30km / h without destabilizing the accuracy of the machine, traction control sensor for adapting the machine in different soils, without operator intervention; load sensor for traction power adjustment as soil adherence, followed tripod, control	Resolution No. 14 of February 19, 2020	0	31/12/2021
9015.80.90	Ex 052	automatic equipment for monitoring variations of surface ocean currents, ocean or coastal, remotely, periodic or continuous, range of up to 300km from the coast, high frequency radar varying in the range of 4 to 50 MHz, fixed remote sensors for emission high frequency signal, two transmit antennas, one receiving antenna, "software" for emission monitoring maps of oil leakage, search and rescue actions and logistics offshore regions.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9015.80.90	Ex 053	10kpsi piezometers 150 degrees Celsius, high strength alloy MP35-N, 276-C compatible material flow, 625, 316L, 70VDC maximum power, maximum 15mA, 10mA to 16sensores more telemetry / cable, laser welding and EB.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9015.80.90	Ex 054	portable for measurement speed probes and wind direction, which uses laser pulsing heterodyne installed on wind turbines, equipped with optics for emission and laser capture, embedded computer to process the data and communication system to transmit them, the total weight of 47kg, optical head, tripod and processing unit, electric power carried by the wind turbine itself, IP65 protection, security classification given the optics lasers specification Class 1M / MS 60825-1: 2014 capable of measuring wind up 400m distance of 10 intervals.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.11.00	Ex 011	Electrocardiographs Portable 3 channel with measurement and automatic ECG interpretation, acquisition and simultaneous printing 12-lead, map view leads, thermal printer roll paper 80mm x 15m, rechargeable battery and LCD 7-inch door USB, RJ45 Ethernet port and baud "wireless" memory.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.11.00	Ex 012	portable electrocardiographs, simultaneous acquisition of 12-lead, selection of derivation in automatic or manual mode, the output port for external printer connection, built-in thermal printer for thermal paper roll 210mm x 20m, touch type LCD color screen with 8 or 10 inches.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.19.80	Ex 101	Multiparameter monitors with TFT color screen 8 or 10.1 or 12.1 inches, 800 x 600 resolution with a maximum of 13 waveforms, battery durability 4h or 8h with internal charger, IPX1 protection with visual and audible alarms, with or without built-in thermal printer, ability to store 720h of continuous parameter data, with USB interface, optional VGA interface, possibility of optional wireless network interface, weighing 2.4 or 2.8 or 3.5 kg, with a capacity ECG monitoring with 3, 7 or 12-lead breathing by the method of impedance between RA, LL, RA-LA, SpO2 (pulse oximetry) with a resolution of 1%, accuracy 70 to 100% ± 2, with graph perfusion index and number, with pulse frequency measuring range between 25 and 300bpm, NIBP (non-invasive blood pressure) with 3 possible manual modes, auto, still with static pressure measurement range of 0 to 300mmHg, tEMP (temperature) with 1 or 2 channels with one update every 2s and with range 0 to 55 ° C and precision ± 0.3 degrees Celsius IP (invasive pressure) optionally having 1 or 2 channels with the measuring range of P1 / P2 (-50 to +300) and sensitivity 5microvolt mmHg / V / mmHg CO2 (capnography) optional with a measuring	Resolution No. 14 of February 19, 2020	0	31/12/2021

9018.19.80	Ex 102	Monitor vital signs compact weighing less than 2.5 kg, colored with TFT 8 inches, 800 x 600 resolution, IPX1 degree of protection with oxygen saturation monitoring capability (SpO2) ranges between 0 to 100% frequency resolution of 1%, accuracy 70 to 100% and $\pm 2\%$, pulse frequency range from 25 to 300bpm, non invasive blood pressure (NIBP) using the oscillometric method by manual operation modes, automatic, continuous with intervals measuring 1 to 480min, capable of measuring systolic blood pressure, diastolic blood pressure, mean arterial pressure in the pressure measurement range on the cuff of 0 to 300mmHg, capable of measuring pulse rate range of 40 to 240bpm, with protection under-pressure 300mmHg, with the possibility of measuring temperature (TEMP) ranges between 25 to 45 degrees Celsius with a resolution of 0.1 degrees Celsius and accuracy of ± 0.1 degrees Celsius with dadosUSB interface and "Ethernet" and with the possibility of using impr essora built-in thermal, battery lasting up to 3.5h, has HL7 communication protocol with optional synchronization with defibrillator and call nurse.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.19.80	Ex 103	Monitors multiparameter designed to monitor vital signs of patients, the ECG being, heart rate (HR), SpO2, non-invasive blood pressure (NIBP), 2 temperature channels (TEMP), EtCO2 (optional), an invasive blood pressure (optional), portable battery built-in replaceable and a high-resolution screen that provides a clear view of patient monitoring parameters.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.19.80	Ex 104	Pulse oximeters with oxygen saturation parameter in the blood (SpO2) and pulse rate (FP); LCD screen 1.8-inch color; simultaneous presentation of plestimográfica wave form of bar graph and the numerical value of SpO2 and PR; memory capacity of 24 data; Feed 2 standard AA alkaline batteries; minimum protection IPX0; SpO2 measurement range from 0 to 100%, and in the range 70 to 100% of the absolute error can be $\pm 2\%$; HR measurement range from 30 to 250 BPM.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.19.90	Ex 066	Device for performing elastography tests compatible with MRI machines operating in the range of 40 to 200Hz, power supply 110 / 220Vac, comprising generator module mechanical waves, hoses for propagation of mechanical waves, acoustic actuating device, several cable signal, network and power.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.19.90	Ex 067	RF amplifier modules (radio frequency) double drive 30kW watercooled to 3 Tesla with a solid dual-drive power RF 127,72MHz with basic functions RF output modes head / body / gain adjustment test exit, head / body coupling signal control, CAN communication link "Controller Area Network" decoded and RF amplification with wave continuous or pulsating.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.19.90	Ex 068	RF amplifier modules (radio frequency) of 16kW cooled solid state water to 1.5 Tesla 63,86MHz with basic functions RF output modes head / body / test output gain adjustment, head / body signal control coupling CAN communication link "Controller Area Network" decoded RF amplification with continuous wave or pulsed.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.19.90	Ex 069	Tubes complete endoscopes with diameter of 2.8 to 16mm and a length of 1.000 to 4.500mm, with or without a CCD imager with connection cable, with or without electronic board connector with the image generator distal end mesh stainless steel to direct the picture, glass lenses for image magnification, light guides in fiberglass for spot lighting, access for plastic biopsies channels, and flexible rubberized casing.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.50.90	Ex 125	Apparatus for ophthalmological surgery, used to perform incision in the cornea (flap) via the microkeratome system for corrections in the refractory surgery "Lasik", provided with: the operation console; Automatic pedal retract / advance, vacuum pedal; tonometer motor with option 3 or 4 rings suction.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.50.90	Ex 126	Disposable heads of plastic material, with blades, to be coupled to the motor, to perform incision in the cornea (flap) 130 and 90 microns, suitable for ophthalmological surgery apparatus.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9018.50.90	Ex 127	Manual use of devices used in eye care in order to restore normal glandular function in patients with meibomian gland dysfunction (GMD) through for thermal pulse in the eyelid, comprising sterile components tip that allows eyelid view through a magnifying lens heating device with target range 38-44 degrees Celsius internal rechargeable lithium ion battery, AC adapter input 100-240VAC, 50-60Hz, 0.5A, 5VDC output, 2A and source optical radiation through yellow-green and infrared LEDs next, for professional use.	Resolution No. 14 of February 19, 2020	0	31/12/2021

9019.20.10	Ex 030	Lung ventilators for oxygen therapy in adult and pediatric patients, and optionally neonatal, which require invasive and non-invasive respiratory care, air leakage compensation, in intensive care situations in hospitals or other medical institutions, operating with recruitment maneuver tool monitoring pulmonary and P0.1, ventilation works (of the patient, ventilator, tax and total), rapid shallow breathing index (IRRS) and maximal intrinsic PEEP patient's inspiratory effort, the minute recording of all parameters monitored in last 96 hours, with maximum flow rate of 180L / min, O2 concentration adjustable 21-100% oxygen and high O2 flow of 2 to 60 L / min, equipped with color screen "touchscreen" minimum at 15.6 inches, resolution minimum of 1,920 X 1,080 pixels, adjustable angle for minimum on turning 200 degrees left and right and at least 40Gaus up and down, and display of up to 4 monitoring curves simultaneously on the screen; internal lithium ion battery, rechargeable, with a minimum range of 1.5 hours of continuous use; inspiratory and expiratory valve, equipped with a flow sensor, autoclavable, and may contain one or more of the following optional: internal air generator;	Resolution No. 14 of February 19, 2020	0	31/12/2021
9022.29.90	Ex 010	Functional units for measuring properties of paper or cellulose using radiation beta type, microwave, light sources and electromagnetic from industrial use to measure sheets approximate width exceeding 10 m, composed of: "scanner" measurement with a measuring casing, thermal equalization embedded system may or may not contain radioactive source strontium (Sr 90); and interface and data processing station.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9022.90.80	Ex 004	Equipment for continuously measuring density profile by X-ray technology for reconstituted wood panels measuring speed of 0.01 to 2 mm / s with a maximum voltage of 160kV maximum anode current of 55mA and a maximum power of 800W / 1.800W controlled by CPU "software" and dedicated measurement range of the material with a thickness of 3 to 65 mm with a density between 400 and 1,500 kg / m ³ .	Resolution No. 14 of February 19, 2020	0	31/12/2021
9024.80.90	Ex 059	Equipment for mechanical testing in rock specimens with a capacity of greater than or equal to 500 kN compression, mechanical strain capacity equal to or greater than 291kN, with and actuator displacement exceeding 100mm.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.10.00	Ex 172	Analyzers for measuring concentration of atmospheric gases, NOx, SO2, CO, CO2, O3, H2, NH3, NMVOC using the modulated decompression chemiluminescence method with continuous monitoring capability and flash gas analysis using the method of selective combustion modulated by cross-flow combined with a method of detection of hydrogen ions.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.10.00	Ex 173	helium leak detection units by analysis by mass spectrometry, with pumping system of 5L / sec, with gas detection accuracy 0.01 E-12 ~ E-6; turbo molecular pump 31L / sec; oil rotary pump 30 to 36L / min; with "sniffer" (sniffing) leak detection and 0.01E-8-3-Pa.m3 / s and 7 inches capacitive touch panel controller.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.10.00	Ex 174	online gas analyzers for oxygen, provided with: ceramic sensor solid-state accuracy: better than $\pm 1\%$ of the value shown and ± 1 digit in calibrated range, sensor flow: 125mL per minute, measuring range from 0 to 100% (standard calibration from 0 to 20.9%), 2 alarm settings for oxygen concentration.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.10.00	Ex 175	online gas analyzers for oxygen and carbon dioxide, the oxygen sensor equipped with $\pm 0.01\%$ in absolute range below 1% oxygen and $\pm 1\%$ relative in the range above 1% oxygen, with time heating 10min, and the carbon dioxide sensor, dual beam infrared temperature-controlled, precision $\pm 0.5\% \pm 1.5\%$ absolute and relative reading with heating time of 8min; with a range from 0 to 100% for both sensors.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.10.00	Ex 176	gas analyzer for quantification of moisture traces by electrolytic principle (P2O5 - phosphorus pentoxide), integrated cell composed of stainless steel and glass tube with internal diameter electrodes 3,125mm and with the sensor element internal tube "display" LCD equipped with mechanical flow control system or electronic communication outputs 4-20mA and RS232, configurable alarm relays.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.10.00	Ex 177	Gas sensor modules for flammable and toxic gas detection with operating temperature from -20 to +50 degrees Celsius, with a detection range of 0-100% LEL methane, 0 to 50 ppm H2S, audio and visual alarm and flag remote sound.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.30.19	Ex 047	Ex 047 - portable Raman spectrometers with laser excitation 785nm, read range 200 - 4.000cm ⁻¹ , with a wavelength of 10 cm ⁻¹ resolution and camera pixels 13mega with Interfaces "Wi-Fi" USB, "bluetooth" , GSM, and IP67 degree of protection, containing built-in spectral library, with bars and QR code code reader.	Resolution No. 14 of February 19, 2020	0	31/12/2021

9027.30.20	Ex 072	Spectrophotometers for agricultural use, used for detection based on fluorescence of chlorophyll vegetation with working temperature between -30 and +60 degrees Celsius, ideal working height of 1.100mm, with four detection channels and wavelength $475 \pm 10\text{nm}$.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.50.20	Ex 126	automatic and computerized analyzers for performing biochemical tests; photometrically methodology; configurable with or without washing station; positions for placing chilled reagents; positions for placement of patient samples; configurable with or without integrated barcode reader.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.50.90	Ex 169	automated machinery, with up to 8 channels, to detect clot formation to perform chromogenic and immunological tests in random access mode using plasma samples collected from blood anticoagulated with sodium citrate.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.80.99	Ex 494	Automatic analyzers salt in oil according to ASTM D3230; test time of 30 s; temperature range -20 to 150 degrees Celsius; resolution of 0.1 degrees Celsius; conductivity range of 0.0 to 151lbs / 1.000bbl and resolution 0,1lbs / 1.000bbl; analysis range from 0.0 to 430g / m ³ and resolution of 0.1g / m ³ ; automatic display of the salt concentration in units lbs / or 1.000bbl g / m ³ .	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.80.99	Ex 495	fully automated hematology analyzers, differential with 3 parts of white blood cells (WBC), 3 21 more histograms parameters, automatic sample dilution, automatic and manual calibration, electrical impedance and colorimetric methods, with or without built-in printer.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9027.80.99	Ex 496	Systems combined to the steel temperature measurement in liquid production process in three-phase electric furnace in the steel industry, with fiber optic technology, without oven door opening for thermal and energy efficiency, operation in all temperature ranges the liquid steel of less than or equal to 1,500 Degrees Celsius and greater than or equal to 1,700 degrees Celsius rate of 50 samples / temperature s, coil compounds calibrated fiber optic cable to capture light and transmitting light, pyrometric Blank converting the intensity of light in micro voltage and subsequent conversion into temperature, fiber optic cable feeder for immersion in the liquid steel bath, bubbling tube support and stainless steel guide tubes 40 4/5 inches SCH, PLC control unit (Programmable Logic Programmer) with power and compressed air supply, indicadores luminosos junction box with the functioning of the system key and interruptora feeder, Bi manual pushbutton (manual / automatic) functions to advance / retreat of the fiber optic cable setups emergency switch and safety reset, processor (PC) with HDMI Full HD 23.8 inch display with a connection HMI (Human Machine Interface) and serial network, Profibus,	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.20.90	Ex 198	Banks tests for fatigue tests on components of diesel fuel injection systems, by pulsing hydraulic flow under pressure with pressure change of the capacity between 2.7 6mil bar pressure, volumetric displacement 14,5L / min; equipped with pressure sensors, filters, filter pump, pressure transducer, "rack" with computer and screen for control equipment, electrical panel for distribution.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.20.90	Ex 199	Testbeds for measurement, control and durability tests for diesel injection system components with function simulation of diesel engine operating conditions, with control of charge cycles, fuel injection with controlled temperature, pressure, amount injected and number of metallic particles generated by system components; equipped with pressure sensors, thermocouples, flow meters, valves, gears, transmission couplings, high pressure pump, heat exchangers, pressure gauges, belts, electronic modules command, temperature controllers, 50L tank, electrical panel command and control electric motor with an output of 44kW, "rack" with computer and screen to command the equipment and head for fixing the guns.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.20.90	Ex 200	Banks test for simulating operation of fuel injection pumps themselves under high pressure to automotive engines, by pressure tests volume of oil and rotation conditions with classification system between pass and fail.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.20.90	Ex 201	Optical systems for computerized analysis of real-time measurement of the coating thickness, convertible into different units of measurement with nanometer precision; configurable for reading by infrared or visible light; preinstalled software; touch screen; reading station with one or more rotating measuring base; two probes coupled to X and Y axes for horizontal and vertical movements; measurement range 0.3 to 250 microns; speed measurement to 50medições / s; measurement technique ability to wet or dry surfaces.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.20.90	Ex 202	Testbeds for truck and bus gear boxes test with 4.700Nm of working torque at 2,000rpm rotation and approximate cycle time of 210s, equipped with electric cabin.	Resolution No. 14 of February 19, 2020	0	31/12/2021

9031.49.90	Ex 471	Machines for inspection of automotive front seat, have: moved by air cylinder security door and solenoid valve inspection equipment of seat belt sensors, photoelectric sensor armrest detection, manual control boxes of the pneumatic cylinder, PLC seat inspection panel front seat photoelectric sensor for inspection reclining degree of seat back, the photoelectric sensor positioning seat in the inspection line, double-pneumatic cylinder drive switch, the central PLC, taken female frame for connecting inspection whips and detection of the seats, the seat anchorage benches for inspection of the front seat, bar code readers, double set of switches pneumatic cylinder drive, connectors for detecting harness type seat, safety lamp for detection the type of bank, docinto coupling safety, connector inspection harness sist ema electric horizontal movement of the seat connectors to harness inspection of seat belts, emergency button, connector harness seat tilt detection connector for inspection harness electrical system handling bank, power supply 24V system electric bench.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.49.90	Ex 472	automatic machines for checking an optical system of the technical specification of the turbine faces fuel pump motor vehicles; consisting of: component transfer conveyor system, pneumatic valve block; main switchboard; auxiliary panel; with AC power and pneumatic power 3kW and 6A current.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.49.90	Ex 473	Machines for inspection for defect detection in the label printing process and labels such as: printing defects, missing labels or torn labels, impurities, record defects among others; used in the printing industry in printing machines and inspection expert review, with field of view of 560mm and a maximum top speed of up to 300m / min.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.49.90	Ex 474	optoelectronic instruments for characterization and test transmission networks, operating by injection of optical pulses and analyzing temporal expectro type "end-to-end" smart optical link mapper, dynamic range 28 to 50,5db, wavelengths 1310 , 1,550, 1,625 or 1.650nm, equipped with 7-inch screen and battery life of 12 hours.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.49.90	Ex 475	Instruments for optoelectronic test / control in transmission networks by measuring through photodiode with wavelength equal to or less than 1.625nm and measuring range (dBm) - 70 + 10 or -50 + 26.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.80.12	Ex 034	roughness measuring stations and contour probing systems provided with transverse unit 120 or 200mm, the positioning speed of 20 to 200mm / s, with less positioning repeatability 50micrometros or less than 10micrometros fixed in tilt unit +/- 45 degrees in measuring column of 500 or 800 mm, with a maximum speed of 20 or 80mm / s positioning, accompanied by the control panel for easy operation of the measuring station, which records measurement and evaluation operations in "software" It is providing a standardized interface for both measurement and roughness or contour, regardless of the device configuration.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.80.99	Ex 058	geometric positioning measuring equipment 3 points on the surface of the passenger motor vehicle wheel module, equipped with mechanical device with measuring sensors 80 to 120mm and 160 to 440mm, with a tolerance of 0.15 and 0.25%; power and communication cables; control panel with programmable logic controller, power supply, input cards, digital and analog outputs and network card, responsible for acquisition, data checking and control equipment.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.80.99	Ex 059	spectral reflectance electronic sensors for measuring normalized vegetation index reading (NDVI - Normalized difference Vegetation Index) for selective application of herbicides on weed provided light emitter and receiver in the red and infrared bands, operating height between 50 and 100cm from the target, the field of view of 50cm sensor length, nominal voltage of 9 to 28VDC and rated power 6W without valve and 16W with the valve produced external structure in plastic "XENYO" high resistance to exposure to water, chemicals and outdoor use, use in automatic selective spraying system.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.80.99	Ex 060	static equipment seaming analysis with analysis system and identification of errors with correction suggestions, HD Resolution 0.0002 inch (0,005mm) or higher, stainless steel case, USB2 interface, variable centering device (depending on the type of can) optical drives.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9031.90.10	Ex 003	Portable devices for supporting type diesel injectors "common rail", developed exclusively for automotive seats of injectors testing for seal testing, electrical insulation and resistance tests; designed to withstand hydraulic pressures of the pressure 1.400bar 2.000bar pressure; approximate operating at voltages up to 2,5 kV.	Resolution No. 14 of February 19, 2020	0	31/12/2021

9031.90.10	Ex 004	handheld devices to support diesel type injectors "common rail", developed exclusively for banks automotive guns tests for sealing testing; designed to withstand pressures up to 2.000bar hydraulic pressure.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9402.90.10	Ex 004	Tables electro-hydraulic medical operations, radiotranslúcidas and exclusively designed for supporting and positioning patients during surgery and may also be used for diagnostic immediately radiological before, during and after procedures with a maximum loading capacity of up to 250kg the normal position and to 190kg in the reverse position, positioning the top of the table "trendelenburg" / "trendelenburg" reverse 25 degrees (± 5 degrees) of the table top tilt left / right 20 degrees (± 5 degrees), tilt plate back 80 degrees (± 10 degrees) upward and 40 degrees (± 10 degrees) downwards, plate tilt legs 20 degrees (± 5 degrees) up to about 90 degrees down, drive the plate legs 90 degrees left to 90 degrees right, plate tilt head 45 degrees (± 5 degrees) upward and 90 degrees (± 5 degrees) downwards, maximum eminima height of the top the respec table tively 950mm (± 50 mm) and 600mm (± 50 mm), with a degree 1PX4 protection rechargeable battery autonomy of operation of about 1 week electrohydraulic mobile column, two control panels (manual control wired and panel column), braking device with electric drive, hydraulic system, angle sensors, the main control unit,	Resolution No. 14 of February 19, 2020	0	31/12/2021
9402.90.20	Ex 017	hospital beds with 4 electric drive mechanisms, with retractable side rails, headboard and board for removable feet, battery support system, the side rail control panel, remote control for the patient and remote control for nursing staff , brake control and driving to the casters, maximum capacity of 250kg, the existence of the fifth wheel that facilitates the movement of the bed, simultaneous parking brake wheels with double density memory foam mattress, IPX4 protection, 10 years of life, statement low height, patient bed exit aid and angle indicators for "trendelenburg" and "anti-trendelenburg" (bed angle) with radiolucent and night light.	Resolution No. 14 of February 19, 2020	0	31/12/2021
9402.90.20	Ex 018	Beds hospital, electrical or not, built in base steel, variable bed height between the minimum height of 22cm and 78cm maximum height, up to 70 degrees of tilt angles of the curve mattress or no platform, with fittings attached or not with the left and right side of the bed guardrail as an option which may or may not.	Resolution No. 14 of February 19, 2020	0	31/12/2021