



**GECEX RESOLUTION 128, OF DECEMBER 10, 2020**

NCM	Ex	Description	Resolution	N°
7309.00.90	8	industrial waste, drinking water or wastewater storage with a capacity exceeding 5m <sup>3</sup> , with a maximum diameter of 75.000mm with a maximum height of up to 30.500mm. (Wording given by CAMEX RESOLUTION No. 31 OF 02 MAY 2018)	Camex Resolution	51
7309.00.90	17	circular tanks made of bolted steel plates coated with vitrified (glass to the molten steel) for storing water, sewage or industrial effluent, with capacities of 75 to 22.700m <sup>3</sup> ; with diameters from 3.30 to 62,20m; whether or not cover in aluminum Domus, steel or double membranes.	Camex Resolution	51
8207.30.00	15	progressive tools for stamping stator blades, rotors and rotors packages airtight electric motors and compressors, equipped with dies and punches, columns, ball cages, plates guide holders, punches and portamatrices, sensors and cables with connectors . (Wording given by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51
8207.30.00	34	Tools used for hot stamping (hot forming) of automotive parts, with punches and dies with internal channels for fluid passage for cooling and uniform seasons throughout the frame parts on the bottom part (punch) and the top (matrix); 1 system inlet pipe 1 and outlet piping system of coolant tubes connecting the connections to the punch and the independent array; 2 electrical connectors 24-pin input and output electrical pulses with data communication system; pressure gauge to indicate the pressure in the nitrogen chamber.	Camex Resolution	51
8405.10.00	3	industrial compact units, mounted on container, for the production of hydrogen from catalytic reforming of natural gas and steam of water, with production 250Nm <sup>3</sup> / h, with heat exchanger and external reformer.	Camex Resolution	51
8407.90.00	3	Internal combustion engines GLP version with four cylinders, with a cylinder of 1.980 and 2.500cc with power between 30 and 47kW to 2.500rpm, with a torque not less than 140Nm up to 1.600rpm and 12V working voltage; specific use in combustion forklifts. (Wording given by SECINT ORDINANCE No. 3533 OF 25 SEPTEMBER 2019)	Camex Resolution	51
8408.10.90	70	electronic marine diesel engines 4-stroke, compression ignition, direct injection, 12-cylinder "V" with piston 170mm diameter, power less than 820bkW with or without reverser transmission for chicken leg.	Camex Resolution	51
8408.10.90	72	Electronic marine diesel engines 4-stroke, compression ignition, direct injection, 8-cylinder "V" with piston 170mm and 190mm stroke with volumetric capacity of 34,5L, power less than 526bkW with or without reverser transmission for chicken leg.	Camex Resolution	51
8408.10.90	73	electronic marine diesel engines 4-stroke, compression ignition, direct injection, 16-cylinder "V" with piston 170mm in diameter; power less than 1.195bkW with or without reverser transmission for chicken leg.	Camex Resolution	51
8408.10.90	113	diesel engines, marine, electronics, 4-stroke, compression ignition, direct injection, inline 6-cylinder with piston 135mm diameter, 150mm stroke and volumetric capacity of 12.9 liters, power less than 625bkW with or without reverser transmission for chicken leg, with or without gas discharge system wet, with or without local or remote monitoring system, with or without electronic control system multi-station.	Camex Resolution	51

8408.10.90	114	marine piston engines with compression ignition (diesel cycle) for the propulsion of vessels, four-stroke, internal fixation of the hull, 6 cylinder in line with outputs of 405HP with direct fuel injection "Common Rail" piston diameter of 114mm, piston stroke of 145mm, volume capacity of 8.9 liters, with turbocharger and charge air cooler with water flow, "display" of electronic monitoring, speed meter clock, engine control lever, direct transmission type "chicken leg" ..	Camex Resolution	51
8408.90.90	1	diesel engines for electric locomotives and diesel hydraulic, maximum power less than 800HP.	Camex Resolution	51
8408.90.90	12	Internal combustion piston engines and diesel cycle, 4 cycle, water-cooled, compression ignition and indirect injection, with four vertical cylinders naturally aspirated and 2.216 liters of a cylinder with a diameter and piston stroke 84 x 100mm, with gross power range for use in stationary equipment 18.7 to 34,4kWm and rotation of 1,500 to 3,000 rpm.	Camex Resolution	51
8408.90.90	21	electronic diesel engines for diesel-electric locomotives and diesel-hydraulic, maximum power less than 740HP.	Camex Resolution	51
8412.90.90	2	Stators provided with helical lobes elastomer molded within the metal tube to positive displacement hydraulic motor (bottom motors) 4¾ the 11¼ "with maximum torque to 43.733Nm used in drilling oil and gas wells.	Camex Resolution	51
8413.50.10	12	Piston diaphragm pumps for pumping ore slurry with 125kW power (167.6HP) of up to 120m <sup>3</sup> / hour, maximum pressure of 25bar discharge, suction pressure up to 4 bar, with electric motor drive and panel of control.	Camex Resolution	51
8413.50.10	36	simultaneously with a maximum operating pressure of 580bar, flow from 5,0L / min per circuit, equipped with alternative volumetric piston pump, driven by a electric motor, three phase, with cage rotor and power 10HP, 220VAC power and control fluid through the four-way solenoid valve. (NCM and No. Ex altered by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51
8413.50.90	45	Alternative positive displacement motor pumps, piston 3 with 8.0 to 12mm, with free starting system mechanically actuated by oscillating cams or disks with angles which can vary from 6 to 12 ° and the ability to develop water flows of 220 and 360litros / h and pressures of 50 to 95bar with universal motor and gearbox, rated voltage exceeding 120V, frequency exceeding 50Hz, and power absorbed or less incorporated 1.900W.	Camex Resolution	51
8413.70.80	15	Centrifugal pumps for washing machine made of plastic, equipped with two engines without DC brush-controlled "drive" drain path with a flow rate equal to or greater than 15 L / min, power exceeding 15W, voltage equal or higher to 20V, 2.500rpm minimum speed and flow circulation circuit with equal or higher than 5L / min, power exceeding 15W, voltage exceeding 20V, 2.500rpm minimum speed, minimum length 120mm, width minimum 200mm, height of 90mm, minimum inlet diameter of 30mm, minimum diameter of the movement output 10mm, minimum diameter exit drain 20mm and central filter element to retain waste with minimal flow 900L / hr.	Camex Resolution	51
8413.81.00	31	High pressure pumps with piston 3 with a production capacity of 10.400kg / h and 120bar pressure with nitrogen dosing system 25%, designed for the transport of liquid products in food plants for the production of margarine and shortening, with the pump parts that come into contact with the product made of AISI 316 stainless steel.	Camex Resolution	51
8414.10.00	28	Vacuum pumps, rotary, oil-lubricated vane, with or without engine, with a nominal capacity greater than or equal to 160m <sup>3</sup> / h and less than or equal to 1.920m <sup>3</sup> / h, vacuum equal to or higher end 0,1hPa (mbar) and lower 0,3hPa or equal to (mbar).	Camex Resolution	51

8414.80.12	4	Elements compressors, free of oil, casting compounds, rotor bolts with or without a speed reducer for air compressors, screw-type, with a maximum working pressure exceeding 3 bar and a maximum flow equal to or greater than 7m <sup>3</sup> / min.	Camex Resolution	51
8414.80.12	7	Elements compressors (screw rotor and housing) with or without gear train for screw air compressors lubricated maximum working pressure exceeding 5bar and maximum flow equal or higher than 0,3m <sup>3</sup> / min.	Camex Resolution	51
8414.80.12	18	Elements rotary compressors, screw-type, self-propelled by permanent magnet mechanically integrated control valve with only cooling for the entire system exclusive application frequency inverters with power of between 7 and 110 kW, maximum working pressure of between 4 and 13bar and compressed air flow between 14.2 and 738pcm. (Composition given by Resolution 30, 30 DECEMBER 2019)	Camex Resolution	51
8414.80.31	2	compression stages, driven by an electric motor; flow 350 to 450Nm <sup>3</sup> / h, hydrogen supply pressure 20 to 30barG, outlet pressure and 180 to 220barG; have: interstage heat exchanger and discharge; oil removal filters; Condensate separator vessels in suction, discharge and interstage in; pneumatic suction valves, discharge and recirculating condensate drains; Nitrogen purging system in sealing; lubrication system comprising an oil pump, oil filter, oil heat exchanger, oil tank, the piston pump for lubrication; Cooling water distribution system; pipe with connections; Instrumentation wired to terminal boxes.	Camex Resolution	51
8417.20.00	17	Ovens for baking with baking capacity of 43,200 mass units per hour (tortillas 39g and 18cm in diameter) equipped with 3 parts of baking, adjustable return rails, electronic ignition, automatic self lubricators for current, automatic lubrication system bearing 3 infrared temperature sensors, three blowers for autonomous combustion, an inverter with individual gear motor for each of the three oven belts, safety system flame and burner in each zone, power supply 460V , three-phase 60Hz.	Camex Resolution	51
8417.80.90	38	Lehr ovens type tunnel modular sections 9, gas for annealing and controlled cooling for glass packaging, with all its components, tunnel length of 20,25m and the total length of 29,25m, with up to 4 zones heating, second heating zones and cooling, four cooling zones, burners, input and output rollers, control cabinet with temperature controller, variable speed control of the mat, electrical panel, fans out table (packaging) system motorization.	Camex Resolution	51
8417.90.00	62	production of "clinker" and calcination of various materials, with an outer diameter exceeding 1500 mm, width not exceeding 700mm, internal diameter equal or greater than 550mm and may or may not include shaft-mounted, made of steel, with a length equal to or greater than 2.500mm. (Wording given by OCTOBER CAMEX RESOLUTION No. 81 OF 17 2017)	Camex Resolution	51
8418.69.99	25	PVC hard grain cooling systems in pressurized water flow through the eductor, drying by centrifugation, capacity 3.200kg / h, equipped with programmable logic controller and colorful HMI control screen.	Camex Resolution	51
8419.32.00	31	Desiccator vacuum insulating paper capable of 12,315m <sup>3</sup> , provided with movable door and electric heaters 4, and PID controller with digital display, controlled nominal maximum temperature of 105 ° C and 160 ° C; vacuum pumping system with pump vanes and rotating blades pump, maximum continuous rated pressure 0,1Pa; vacuum valves at right angles to ISO K-DN63 flange; water cooled condenser type shell-and-tube cooler and water; Vacuum measuring system with vacuum sensor and display; sensors for measuring dew point and the volume of extracted water; cab command and control with programmable automation and process parameter monitoring.	Camex Resolution	51

8419.39.00	2	Conditioners continuous action leather with injection of high pressure air by forced convection, without system expansion of hides, transportation of the hides for 3 or more superimposed mats installed within the conditioners.	Camex Resolution	51
8419.39.00	108	Machine dry creping synthetic laminates, of up to 100 kg with use of hot air jets from heat generated by heating the thermal oil liner stainless steel, polished stainless steel drum.	Camex Resolution	51
8419.50.10	7	Combined heat exchangers of brazed aluminum plates with internal fins made of an air-oil heat exchanger and an air-air exchanger, forming "single body" for maximum pressure equal to or greater than 13bar.	Camex Resolution	51
8419.50.10	25	Combined heat exchangers of brazed aluminum plates with internal fins exchanger consisting of a "cooling liquid-air" exchanger, and a "plowing tablet" forming one body for maximum pressure equal to or less than 13bar.	Camex Resolution	51
8419.50.10	32	Heat exchangers combined in brazed aluminum single body, compressed air with working pressure of between 4 and 16bar, and the refrigerant gas with pressure between 2 and 30bar, suitable for cooling compressed air inlet compressors by gas refrigerant and preheated compressed output OA, with connections for condensate separation device installation.	Camex Resolution	51
8419.50.10	36	Heat exchangers made of aluminum corrugated plates propylene subcooling, with the fastening system and sealing Brazed vacuum as standard ALPEMA with collectors 6 nozzles welded to the side beams, the partition plates to the support structure and transportation, used in operations with ethane and recycle gas with minimum design temperature of -55 ° C and maximum 65 ° C, pressures design 20,9kgf / cm <sup>2</sup> g on the propylene side of 12,0kgf / cm <sup>2</sup> g in side of ethane and 9,2kgf / cm <sup>2</sup> g side of the recycle gas	Camex Resolution	51
8419.81.10	1	Industrial rotary autoclaves with excess pressure for sterilization by means of water spray produced in 304L stainless steel with a diameter of 1.600mm; with stirring rotational capability between 5 and 25rpm, vertical hydraulic door opening; with baskets made of stainless steel 304L for loading products and partitions for accommodating the products to be sterilized with a carrier for automated loading and unloading of the baskets; water recovery system and system for process control.	Camex Resolution	51
8419.81.90	49	with programming for regulating beverage servings, using special packages "BAG-IN-BOX" (BIB) disposable, with a capacity of 1 product package to produce 2litros / 0, 53Usgal or 1,25litros / 0,33Usgal, locking and unlocking system through USB key, water supply "standard" 1/2 supply pipe or 3/8 "union piece with 3/4" drinking water tube valve "stop" and maximum water inlet temperature of 60 ° C / 140 ° F, the water dynamic pressure 0,8bar min to 10L / min - 2,6Usgal to 11psi / min and static pressure of water max. 10bar - 140psi, has boiler with capacity 8litros / 2,1Usgal to 9litros / 2,4Usgal.	Camex Resolution	51
8419.81.90	50	coin mechanism (payment system), with programming for regulation of beverage servings, using special packages "BAG-IN BOX" (BIB) disposable, with capacity of production of 150 cups / minute, and unlocking the locking system through USB key, a standard 1/2 with water supply tube or supply 3/8 "with connecting piece 3/4 " drinking water pipe with valve retention, dynamic water pressure min. 0,8bar to 10L / min - 2,6USgal to 11psi / min and max static water pressure of 1.0 to 140psi with boiler with a volume 1,2litros / 40,5onças fluid and adjustable temperature between 83 ° C and 97 ( and 206,6°F 181.4).	Camex Resolution	51

8419.81.90	51	Automatic espresso machines and other soluble beverage in hot water tower or countertop without payment device for the beverage, monodólicas, provided with: water inlet electrovalve system (with mains water pressure between 0.5 and 8,5bar), incorporated heating device boiler - a mechanism with variable camera, stainless steel, set to different temperatures, allowing the production of drinks, with or without supply of steam and high temperature between 125 and 133 ° C; containers for ingredients; coffee grinder; mixers; feeders; bomb; column engine change; and cupholder grid; with or without automatic dispenser cup; waste liquid container; and control panel; with power from 1,600 to 2.800W.	Camex Resolution	51
8419.89.19	28	Sterilizers food by ultra high temperature ( "UHT - Ultra High Temperature") with direct steam injection, equipped with valves, balance tank, filters, flow meters, pressure sensors, vacuum chamber, a steam injector, homogenizer and control panel, forming a single body with minimal processing capacity of 2,000 and a maximum of 30.000L / h.	Camex Resolution	51
8419.89.99	107	heat treatment tunnels through high internal temperature, turns the treatment liquid on and gas via the internal fans, gas flows between the glass articles that are online, thus creating a film that increases the mechanical strength of articles; the equipment has an exhaust system and security system.	Camex Resolution	51
8419.89.99	176	horizontal tanks for the production of curd, with a minimum capacity of 10,000 liters and maximum 30,000 liters (in increments of 2.500 liters) with milk filler functions to the cheese mix ingredients, milk coagulation, cutting of the curd, mixing, discharge serum, adding water, heating, cooling, emptying and cleaning (CIP), comprising: heating and cooling tank; cutting and stirring device; bearing and shaft seals; electric motor with frequency converter, which controls the engine speed; whey discharge device; Cleaning device (CIP); temperature probe; level probe; control panel - PLC; and motor control center (switches and frequency converter).	Camex Resolution	51
8419.89.99	200	using hot water to 60 ° C, lining of stainless steel, polished stainless steel drum.	Camex Resolution	51
8419.89.99	201	medium voltage electrical heaters for heating ethane gas with 4,16kV voltage, maximum installed power 3.510kW, stainless steel vessel 304, manufactured and designed to ASME Section VIII Division 1 with internal heating elements nickel-chromium (80/20) coated Incoloy 800, project -103° temperature to 80 ° C, power interconnection and control panel installed on the heater body, electric control panel type NEMA 1, provided FULL SCR trigger, SCR circuits, the counter pole vacuo and fuse disconnecter pole.	Camex Resolution	51
8419.89.99	202	gas treatment units through deoxidation and hydrogen DRY mounted in "skid" capable of treating a gas stream to 1.150Nm <sup>3</sup> / h 4,0barg operating pressure and inlet temperature to 43 ° C, consisting of preheater vessel with deoxidation catalyst bed, finned tube cooler (heat exchanger), air cooler; pre-chiller cooler and cold water, water separator vessels, blower, automatic valves, piping and instrumentation mounted and wired to junction boxes.	Camex Resolution	51
8419.89.99	203	cooling water cooling panels with a capacity of working 6barg, internal volume of 615 liters with a power of 8,3kW motor, speed 865rpm, three-phase, 480V voltage with internal copper pipes with aluminum fins.	Camex Resolution	51

8419.89.99	204	decontamination of post-consumer PET resin (polyethylene terephthalate) by the extraction of volatile and increased molecular weight (intrinsic viscosity -IV), operating under vacuum at a high temperature ( min 160 ° C and max 220 ° C) and using nitrogen to help in the removal of volatiles and reducing oxygen levels in preventing discoloration of the material that is cooled in batches of about 200 kg in process "first in - first out "in the lower reaction temperature (lower than 180 ° C); complete with PLC, user interface with touch screen, control units and nitrogen generation process unit, the supply and discharge into storage bin by a vacuum system, heat exchanger, vacuum separator filter cartridge and tubing ; with maximum capacity equal to approximately 1.800kg / h depending on the reaction time, net internal volume of the reactor equal 14,2m <sup>3</sup> end and humidity of less than 50ppm.	Camex Resolution	51
8419.90.39	9	block, with the total area comprised thermal exchange between 0.69 and 848m <sup>2</sup> , provided with four guide-columns and two structural carbon steel plates.	Camex Resolution	51
8420.10.90	2	Continuous press, calender type to dry hides, using 2-roll coated felt, with a capacity exceeding 65 tonnes working width and not less than 1,700mm, provided felt washing system.	Camex Resolution	51
8420.10.90	4	continuous hydraulic presses, calenders type to mangle and record leathers with storage system and / or exchange of rollers, roller heating system with working width or less than 1,600mm.	Camex Resolution	51
8420.10.90	5	rotary hydraulic presses, roller type, for stretching and embossing hides and skins, with heated rollers and programmable logic controller (PLC) and useful working width exceeding 1.600mm.	Camex Resolution	51
8420.10.90	6	continuous Hydraulic press (calender) to roletar, flatten and smooth leather soles, with a maximum pressing force greater than or equal to 36 tons.	Camex Resolution	51
8420.10.90	8	Machine for stretching leather sole calender type with double cylinder estiras bielicoidais and movement-reversing system "kink" with adjustable speed from 0 to 30m / min or higher.	Camex Resolution	51
8420.10.90	40	Hydraulic rotary presses, roller type mangle for hides and skins, with a heated roller with an effective working width exceeding 1.600mm, a thickness regulating rollers between operators, working pressure to 130kg / cm 2 knives scraping the interior felt.	Camex Resolution	51
8420.10.90	45	Combinations of machines for straightening surfaces synthetic polyurethane laminates, comprised of: general control of the machine speed for convertible frequency technology system; control screen; hydraulic pressure system; automated temperature control system; 1 2-roll unwinder; First accumulator fabrics of up to 20 m; 2 platforms; 1 straightening system with a smooth roller heated by thermal fluid temperature up to 180 ° C and polyethylene film; 1 the water cooling system with two cylinders; 1 rewinder 2 cylinders; control system.	Camex Resolution	51

8420.10.90	46	polyurethane laminates composed of: 1 biaxial unwinding machine; First accumulator box tissue steel to 2.880mm full extension and capacity to accumulate 20m x 1,700mm maximum width; 1 oven with hot-air heating to 230 ° C with 3.200mm in length; 1 electric infrared heating system containing 9 to infrared heating tubes 1,2kW gold plated, by infrared heating tubes 15 4kW gold plated by 21 infrared quartz heating tubes 3kW, 3 infrared temperature gauges, 1 or two gear pressurized air lift, two vertical lifts pneumatic cylinder maximum 100 x 500 mm, 1 electronic temperature controller, the first heat transfer oil pump 2HP, 1 motor 3HP and worm speed reduction gear; 1 hydraulic system embossing, supporting embossing roller 1 with a diameter of 200 to 240mm x 1,700mm maximum width; 1 the water cooling system with four steel drums; 1 with central winding type biaxial winding; 1 electrical panel and control box. (Wording given by SECINT ORDINANCE No. 3533 OF 25 SEPTEMBER 2019)	Camex Resolution	51
8420.10.90	47	Calenders heated, suitable for compact cotton bands with smooth rollers or not (with or without embossed design patterns), speed up to 50m / min, maximum bandwidth of 250mm, with control panel.	Camex Resolution	51
8420.91.00	4	Cylinders (shirts) for calendering rolls used in paper and pulp industry, made of chilled cast iron with hardness of 550 to 600HV (Vickers) with or without coating.	Camex Resolution	51
8420.91.00	5	Cylinders (rolls) Heat to calenders used in the paper industry, made of chilled cast iron or forged steel, surface hardness of 550 to 600HV (Vickers) with inner conductors channels for insertion of heated fluid and may be provided with shaft ends , bearings and one or more rotary joint. (Wording given by APRIL RESOLUTION No. 30 OF 01 OF 2020)	Camex Resolution	51
8421.19.90	54	removal of bacteria and spores in milk and other food processing liquids, with equal or higher capacity 5.000L / h with minimal power 15kW, minimum efficiency 96% reduction of anaerobic spores at a temperature of 55 ° C basically provided with: output device; reservoir; Drive device with a vertical axis of the reservoir; Water processing module (OWMC); horizontal drive device; worm gear; feet of the base; flexible coupling; electric motor; Liquid input device not separated at the bottom of the separator; output device of the separated liquid light phase; and automatic discharge of sediment.	Camex Resolution	51
8421.21.00	9	Modules hollow fiber ultrafiltration membranes of polyvinylidene fluoride (PVDF), with an inner reinforcement and resistant to the 500.000ppm / h of chlorine, internal nominal diameter of 0.8 mm and outer diameter of 1.9mm and a nominal length above 1,912 mm with a nominal pore size 0,04µm and absolute pore diameter of 0,1µm permeate collectors set at the ends to the upper and lower filter area per module 34,4m <sup>2</sup> for treating effluents and for 40,9m <sup>2</sup> water treatment, with flow in and out for submerged operation suspended solids concentrations up to 50.000mg / l, working with a transmembrane pressure range between -55 to 55kPa for treating effluents from -90 to 90kPa for treating Water.	Camex Resolution	51



8421.21.00	10	Treatment systems by filtration and purification of water or wastewater, mounted on steel framework with air outlets in the lower part for aeration up to 64 retrolaváveis ultrafiltration membrane modules of the hollow fiber polyvinylidene fluoride (PVDF) with internal reinforcement and resistant to 500.000ppm / h of chlorine, internal nominal diameter of 0.8 mm and outer diameter of 1.9mm and a nominal length of 1.912mm above, with a nominal pore size of 0,04µ and absolute pore diameter 0,1µ permeate collectors set at the ends to the upper and lower filter area per module 34,4m <sup>2</sup> to 40,9m <sup>2</sup> wastewater treatment and water treatment, with flow in and out for submerged operation suspended solids concentrations up 50.000mg / l, working with a transmembrane pressure range between -55 to 55kPa for treating effluents from -90 to 90kPa for water treatment.	Camex Resolution	51
8421.21.00	24	fluoride (PVDF), resistant to 1.000mg / l of sodium hypochlorite, the internal nominal diameter of 0,66mm and external nominal diameter of 1.1mm, with a size nominal pore 0,02µm and absolute pore diameter of 0,1µ m, vertically fixed between two heads of plastic material, with a filtration area per module 55,7m <sup>2</sup> for water treatment and tertiary treatment of sewage with flow inwardly and pressurized operation, working with a transmembrane pressure range from 0 to 276kPa with permissible maximum pressure hull 379kPa.	Camex Resolution	51
8421.21.00	48	(PVDF), resistant to 500.000ppm / h of exposure to chlorine, the internal nominal diameter of 0,47mm and external nominal diameter of 0.80 to 0.95mm and length exposed to 543mm, with a nominal pore size 0,02µm and absolute pore size of 0,1µm horizontally clamped between a head and the other plastic head permeate collector with filtration area of 41.8 for the 65 m module for treatment of water or wastewater in order to filter out flow into and submerged operation working with a range of transmembrane pressure between 0 to 90kPa.	Camex Resolution	51
8421.21.00	49	Treatment systems by filtration and purification of effluents, mounted on steel framework with air outlets in the lower part for aeration up to 52 retrolaváveis ultrafiltration membrane modules of the hollow fiber polyvinylidene fluoride (PVDF) with inner and resistant reinforcing the 500.000ppm up / h of exposure to chlorine, the internal nominal diameter of 0.8 mm and outer diameter of 1.9mm and a nominal exposed length of up to 1.912mm, with a nominal pore size 0,04µm and absolute pore size of 0,1µm permeate collectors fixed in the upper and lower ends, with a filtration area of 27.9 to 34,4m <sup>2</sup> / module with filtration flow direction from outside to inside and submerged operation suspended solids concentrations of up to 50,000 mg / L, with a working range of transmembrane pressure of between -55 to 55kPa for treating effluents from -90 to 90kPa and water treatment. (Wording given by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51
8421.21.00	65	system with machine combinations which combines in the same apparatus, flotation and filtration, with plastic cover mat with filter material woven-non-woven fabric for the treatment of waste waters in general and the pre-filtration before sand filtration or reverse osmosis, you can achieve the removal of up to 95% total suspended solids removal and 90% oil, made from AISI 316 stainless steel.	Camex Resolution	51
8421.29.90	111	pipe threaded at the ends, jacketed with a metal screen frame 100-350 microns.	Camex Resolution	51
8421.29.90	112	horizontal presses for the manufacture by stretching bodies of aluminum cans, mounted in "skid" with capacity equal to or greater than 830litros / min, programmable logic controller (PLC) and protocol Ethernet communication.	Camex Resolution	51

8421.39.90	59	Capacitors humidity ("water trap") for respiratory gas analyzers, with 0.8 micrometer filter, interconnecting tube with female luer connection / male body free latex and low dead space volume, capacity 0.025 l.	Camex Resolution	51
8421.39.90	62	Filters for steam to the steam contamination-free filtration with membrane filters in stainless steel frame among the segmented discs to prevent contamination, product loss and waste in various sectors, with minimal filtration capacity of 25 kg / h and maximum 4.000kg / h 121 ° C, with or without a manometer with glycerine and valves for condensate drainage with pore sizes of 3 to 100µm, interconnected by connections DN15 to DN80 (basic nominal diameter in millimeters).	Camex Resolution	51
8421.39.90	63	Filters for air or gas to sterile filtration efficiently to prevent contamination, waste and loss of product in the water production process, beer, beverages, foods, dairy products and others, filter membranes made of PTFE (polytetrafluoroethylene) between the segmented discs stainless steel with absolute retention rate of 100% and 0,20µm membrane efficiency with filter material stainless steel and interconnected by connections to DN80 (basic nominal diameter in millimeters), with filtration capacity of 40 to 5.440Nm <sup>3</sup> / h working pressure of 1 to 16barg. (NCM and No. Ex altered by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51
8421.39.90	64	filtração particles, applied in all industries, with filter membranes on stainless steel frame among the segmented discs, with minimal filtration capacity 40Nm <sup>3</sup> / max h, 5.440Nm <sup>3</sup> / ha 7barg with manometer with glycerine, with or without valves for condensate drainage with pore sizes of 3 to 200µm, working pressure from 1 to 16 barg, interconnected by connections DN15até DN80 (basic nominal diameter in millimeters ). (NCM and No. Ex altered by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51
8421.99.99	20	housing modules reinforced polypropylene, glass fiber for filter elements (cartridges) of Ø 8 "destined for system mounted in a" skid "vertical liquid filtration flow from outside to inside, inlet connection 3" maximum operating pressure of 150psi recommended flow 250gpm 60 element length "without filter cartridge.	Camex Resolution	51
8422.30.10	8	speed equal to or greater 9.000frascos / hour, vacuum insulated, stainless steel insulated vacuum hose, with or without electronic controller velocity modulation, with or without phase separator with minimal dosage adjustment 0,01 g / dose, 5% accuracy sensor and the presence of bottles and speed.	Camex Resolution	51
8422.30.10	45	and / or other controlled by a PLC, provided with a system for automatic distribution of natural cork or synthetic with centrifugal or vibratory or cellular, able to limit the creating cork powder, presence bottles control device, injection device or not of inert gas in the neck of the bottles before and tampamento compressor blocks with quick extraction system capable of corking bottles of 750 to 2,000 ml, maximum speed of 12.000garrafas / hour.	Camex Resolution	51
8422.30.21	66	Automatic bagging machines for filling packages of the type "big bag" with granular fertilizers, unitary filling capacity with minimum and maximum of 500 kg to 1,200 kg and a production capacity of 120 t / h, controlled by programmable logic controller (PLC) and man machine interface (HMI), with dust reduction system, compressed air system provided with two holders for packaging rolls, automatic balance for product weighing two semicircular clamps for clamping the package, air blower for forming the package and filling material, closing device for the entrance and automatic packaging conveyors for displacement of "big bags".	Camex Resolution	51

8422.30.29	78	Rotating Machines for packaging of food products, liquids or pastes with solids in autoclavable cartons, provided with 20 filling cavities (vertical piston valves) with a capacity of 400embalagens / minute.	Camex Resolution	51
8422.30.29	274	Equipment choice and boxing ceramic tiles with size control and automatic flatness, conveyor belts, with 4 or more trucks, more speed 180peças / min with automatic palletizing.	Camex Resolution	51
8422.30.29	323	automatic, vertical machines for forming, filling and sealing plastic containers with metering scale of multiple printheads, 2 or 4 axes servomotorizados rotatable clamp (flat, single, double or triple), a maximum speed of greater than or equal operation 100pacotes / min (variable according to the product to be packaged and the characteristics of the containers), providing variations in weight between the smaller containers than 1% (99% efficiency) for packaging a minimum length of 50mm, maximum length greater than or equal to 180mm and a width equal to 40mm, a maximum width greater than or equal to 180mm, with or without parabolic metal detector ( "intelli-detect"), with or without date scanners, film and packaging code, with or without removal conveyors packages, with or without verifying scale, with industrial PC and "software" dedicated.	Camex Resolution	51
8422.30.29	327	Automatic machines for filling liquid and pasty products up to 96 ° C in a laminated flexible packaging films with automatic mechanism for forming, filling and sealing the flexible film into individual pouches with an air removal system for bags by rollers, with logic controller programmable (PLC), with drive wheels for film feed system with pneumatic closing, with vertical sealing system still type "seal fin" multiestriado with man-machine interface (HMI) in Portuguese production capacity of up to 40embalagens / min to size bags 100 x 120mm and 260 x 500mm.	Camex Resolution	51
8422.30.29	380	and wrapping PET containers (ethylene terephthalate) with UHT (long-life milk), composed of: aseptic filling machines with greater nominal capacity than or equal to 15,000 containers / hour ( containers 1 liter) containers and closures decontamination system through the H2O2 vapor injection and activation / drying with hot air, filling the enclosure with sterile environment, continuous filling control system, sealing system (seal application) of aseptically packaged containers, rejection system of non-compliant containers (and / or collection of samples for laboratory quality inspection) defective code printing and table collection, CIP-SIP system for self-cleaning sterilization, COP-SOP system a surface cleaning and sanitizing; with or without application station protection screw caps; labels application station with automatic speed adaptation system according to the input stream of containers, for containers having diameters between 55 and 130mm; grouping station containers unified momentum, capable of grouping and packaging the containers only with heat shrinkable plastic	Camex Resolution	51
8422.30.29	381	pressure", in polypropylene or polyethylene vials with a nominal capacity of 6,000 bottles of 500ml per hour, able to operate with bottles of 125, 250, 500 and 1,000ml have: a rotary input conveyor for manual feeding of bottles; positive pressure with cabin air curtain isolation environment controlled ISO Class B 5; carousel 21 positions for the cleaning of bottles by blowing and suction ionized sterile air; 50 liters Expansion tank with dosage control and product storage supply; carousel 24 to position for filling product filling nozzles; Vibrating dedicated elevator and basket for feeding caps; Carousel position 30 for removal of excess air, applying and sealing plastic 32mm pressure caps and heating; outfeed conveyor with adjustable height; cleaning by CIP and / or SIP and self-diagnosis system operation, maintenance and process control.	Camex Resolution	51

8422.30.29	382	accumulation table filling station comprising six filling nozzles 6 peristaltic pumps, closure system for vials by placing rubber stopper conveyors vials and set of tanks -lung for feeding the filler; capacity: up 75frascos / min (with water-based products at 22 ° C); Bottles size range: between 16 and 88mm diameter and height between 35 and 150mm; filling volume: 0.3 to 500ml; installed power: 10kW; standard voltage: 400V, 50Hz, 3PH + N + G.	Camex Resolution	51
8422.30.29	383	Machine aseptic filling machines, automatic, continuous, to package milk UHP (UHT milk) in PET containers (ethylene terephthalate), with greater nominal capacity than or equal to 15,000 containers / hour (containers 1 liter) containers decontamination system and seals over the H2O2 vapor injection and activation / drying with hot air, filling the enclosure with sterile environment, continuous filling control system, sealing system (application seal) the containers already aseptically packaged, containers rejection system non-compliant (and / or collection of samples for quality inspection in the laboratory) faulty code printing and table collection, CIP-SIP system for self-cleaning sterilization, COP-SOP system surface and sanitizing cleaning with logic controller programmed (PLC).	Camex Resolution	51
8422.30.29	384	bottles recravadoras machines with the function of: collecting bottles in the accumulation table; automatic transfer of bottles; automatic closing of the vials in 2 steps: positioning the cover and seal the foil seal; collecting bottles in output and shipment to end accumulator table; to control the sealing pressure by the load cell; safety lock on the glass doors; presence and position sensors jars and lids; reject station deflecting device with non-conforming products; integrated control cabinet, separate main electrical cabinet PC for machine control (software) and PC to manage all functions controlled by the operator for alarm message display and management of production; coupled to printing system and vision datamatrix codes; nominal speed production 3.000frasco / h, with the possibility to operate with bottles of 250ml and 6 to batch 750-19000 vials.	Camex Resolution	51
8422.30.29	385	with single or double track, with a capacity exceeding 60barris / hour, consisting of: filling machine barrels with integrated internal washer with Programmable Logic Controller (PLC) with volume flow control DFC "Direct flow control", with one input station 1 waiting station with one immersion station soda lye with 5 active stations washing with one filling head, with 1 exit station; automatic turner for full barrels and / or empty; transport system of the barrels with drag chains, adjustable support feet, transfer plates between sections of conveyors, light grids, guides for side shields, electrical cabinets, electrical wiring with superior cable trays; Unit for feeding utilities combined with one or more tanks, pumps, instrumentation mounted on a valve frame "skid" and pipes with or without isolation for interconnection.	Camex Resolution	51
8422.30.29	386	Automatic filling machine and seal food packaging type preformed flexible bag with an operating range 250 to 450mm in width and 300 to 600mm in height, with rotating carousel filling composed of 4 independent stations for feeding the pouches, opening pouches, filling of solids, and sealing with maximum capacity 3.200bolsas / h with a control panel "touch screen" and programmable logic control - management PLC.	Camex Resolution	51

8422.30.29	387	production of flavors and fragrances essences for up to 248 liquid components with up to 4.320kg / hour production capacity, equipped with programmable logic control - PLC with 200 flow control valves two 5bars flows for large flow and 2bars for fine flow high-precision, 16 storers containers parts with volume of 30 liters each and 2 storers containers parts with volume of 600 liters each provided with suction module to the vacuum system label printing for identifying lots, scales 30kg and 600kg; Electric heating module components and integrated with connectors palletizing system with 5 anchoring points.	Camex Resolution	51
8422.30.29	388	vials, carpules and small cylindrical containers with a maximum capacity equal to 500peças / minute (variable depending on the size and characteristics of the containers), for containers with a diameter of 8 5 and 32mm, maximum height equal to 120mm, with or without rotary tables feed and / or discharge, code printer datamatrix and variable data, optics inspection variable data and lid seal color, bottles rejector non-compliant, labels reel double support (tags) for easy amendment (coil exchange without stopping the machine), protections for safety and acoustic control with programmable logic controller (PLC) and control panel with man-machine interface ( HMI) (Wording given by RESOLUTION No. 11 OF 30 JANUARY 2020)	Camex Resolution	51
8422.40.90	274	Machine packing / automatic wrappers for packaging poultry parts, meat, fish or hortifrutigranjeiro through engagement PVC films stretchable / extensible or retractable polyolefin in rigid trays or PS (polystyrene) with a length not less than 130mm, width less than 100mm and height less than 10 mm, equipped with universal elevator, the film drawing tension selection device, turning the inverter device of the motor and control panel with speed equal to or greater than 22bandejas / min.	Camex Resolution	51
8422.40.90	472	Horizontal continuous and automatic machines for bottling soft drink and dessert powders with volumetric dosage for 25g or 30 to packaging "type sachet welds 4" with a width of 90mm and height variable between 90 and 120mm, with capacity equal to 2.000embalagens / min, unwinding reels 2 for the rapid exchange and programmable logic controller (PLC).	Camex Resolution	51
8422.40.90	490	Machines for packing goods with termorretrátril film packaging capacity to 60unidades / h able to work with polyethylene film, polyolefin, high density polyethylene and polypropylene. (Wording given by CAMEX RESOLUTION No. 90 OF 13 OF DECEMBER 2017)	Camex Resolution	51
8422.40.90	588	Machine automatic packaging machines for packaging trays containing food by wrapping in plastic film, with or without weighing function and labeling, feeding and extraction of manually tray, maximum processing capacity to 30bandejas / min, the coil width or greater than 300mm.	Camex Resolution	51
8422.40.90	684	Combinations of machines for the processing of "cold ready meals", tray with a capacity equal to or more than 33 trays per minute, composed of: one automatic dispenser tray prepared to work with two types of trays in different formats; Table 1 filler of up to 44 trays per minute; 3 volumetric dispensing of liquid sauces, semigranulados and / or pasty interconnected with electronic dosage control, with capacity of 80 to 400 ml, depending on the type of product to be dosed; 1 checadora weight "in-line" with a capacity of up to 700 packages per minute; 1 and punching applicator valve with applicability to valves 44 per minute; 1 traysealer trays for heat sealing of the trays with a capacity of 4 bins per cycle, total 11 cycles per minute; 1 metal detector with dual frequency pattern memory and up to 100 different products; 2 tanks lungs with a capacity of up to 700 liter jacketed and insulated, keeping the heated sauce to a temperature of 75 degrees Celsius.	Camex Resolution	51

8422.40.90	685	up 45ciclos / minute with 10 tortillas packages with a diameter of 18 to 25cm, automatic adjustment prescription, with the control system programmable logic, servo motor-controlled frequency regulation, integrated closing device.	Camex Resolution	51
8422.40.90	686	automatic thermoforming machines for forming rigid packages from CPET (pet crystallized), equipped with pre-heating section, thermoforming section and cutting section, with programmable logic controller (PLC) and control screen "touchscreen" with maximum film width between 670 and 810mm, maximum training area of 620 x 440mm and 760 x 580mm, the maximum forming height above and below the film level exceeding 120mm, maximum production capacity exceeding 40ciclos / minute.	Camex Resolution	51
8422.40.90	687	arqueadoras equipment loads (cargo lashing), capacity equal to or greater 2.300N voltage, three-phase motor with 0.75kW, tape casting speed exceeding 5.5 m / s speed of recovery of greater than or equal ribbon 2.5 m / sec to tape width exceeding 8mm, and a thickness exceeding 0.5 mm.	Camex Resolution	51
8422.40.90	688	Combinations of automatic machines for tying packages cardboard boxes with capacity for up 12.000ciclos / hour, consisting of: two bonds application stations (straps) to the packets, each with two automatic cintadoras with a capacity of 30 applications per minute (depending on the dimensions of the packages) with feed and exit conveyors; 2 diverters 90 ° packets with dimensions equal to 1.676 x 1.676mm; intermediate transfer conveyor and accumulation; bidirectional driver packages with dimensions equal to 2.337 x 1.676mm; 2 packages of working stations for the correct pre-positioning mooring, with dimensions equal to 1.676 x 1.676mm; management system with PLC and "software" dedicated.	Camex Resolution	51
8422.40.90	689	programmed weights, provided with: blister tray and dual head fixing by the action of suction cups for feeding with electronic frame control and a capacity exceeding 24embalagens / minute, or not equipped with automatic labeling.	Camex Resolution	51
8422.40.90	690	extensible film wrappers manual machines (stretch) on pallets, provided with counterweights driven crank, with friction basket and adjust the film tension, for packaging loads or products of any weight capable to pack up 15pallets / day, minimum height the product maximum 2.000mm and 2.400mm, using 60cm away from the load to be wrapped.	Camex Resolution	51
8422.40.90	691	automatic machines to form, close and box deodorizer packages in cardboard boxes by means of multi-axis robot, with a maximum capacity of 30caixas / min, with automatic closure system for hot glue box and drives servomotors controlled by PLC.	Camex Resolution	51
8422.40.90	692	a suture winding equipment in plastic packaging (III zipper) and printed paper packaging (paper I id), with suture carrier robot type for needle attachment to the accommodation container suture, rotary table and winding head upper and lower nominal speed of 25 cycles per minute.	Camex Resolution	51
8422.40.90	693	Machines for making "drops" (grouping bullets) at high speed with the ability to wrap 950balas / minute individually in round, square, rectangular or oval form and in continuous loop form and wrap 95drops / minute, with a programmable logic controller - CLP.	Camex Resolution	51
8423.30.11	5	Automatic forming portions, to fixed weight, capable of forming / cluster 18 to 24 portions or batch / min, with a final weight of 100g to 2kg / batch, according to the fixed weight set by the computer system, composed of: 1 infeed conveyor, 7 static scales weighing and 1 treadmill output conveyor.	Camex Resolution	51

8423.30.11	6	production of "batches" (portions / batch) of fixed weight, capable of forming / cluster 12 to 25porções or batch / min, with a final weight of 100g to 35kg / batch, according to the fixed weight set by the computer system composed of: 1 input conveyor; 4 static scales and weighing 2 groupers at the end compartments called "bins".	Camex Resolution	51
8423.30.11	10	birds weighing equipment, digital auto-calibration, consisting of two wheels 6 or 8 inches interconnected through gears 4 and sensor for electronic compensation of vibration of up to 14.000aves / hour, with or without distribution system system electronics.	Camex Resolution	51
8423.30.11	19	bagging equipment fully automatic, grain and chaff to preformed bags open mouth, and may use suture bags, paper or plastic, "range" weight between 5 and 50 kg, production capacity of up 800sacos / hour equipped with feeder, scale, magazine, tab, placer, automatic closing and remote connection.	Camex Resolution	51
8424.20.00	7	applying spray guns high density materials (pastes or fluids under cabs) and composed together rotating spray head, flow capacity of up to 2.4 L / min and air pressure control comprised between 6 and 10 bar, provided or not aligned applicator nozzles at angles of 0, 45 and 90 °, corrugated hose fitting connection device.	Camex Resolution	51
8424.20.00	8	rotary electrostatic paint sprayers for direct or external load, equipped with pneumatic turbine to allow greater speed in spinning bell, comprising a speed equal to or lower 70.000rpm.	Camex Resolution	51
8424.30.10	41	of the head and the engine block, through water jet / detergent cored alternating under low, medium or high pressure, respectively, with pressure 0,55Mpa , 1,35Mpa or 40Mpa and flow comprised of 4,000 to 55.000L / h, fitted with cleaning nozzle robot programmed to the high pressure grinding water chamber / detergent provided with forced immersion device with gradual pressure supply 1 , 35Mpa, for creating turbulence for the rotation of the part 90/180 inside the camera, SV drying device ( "sotto vuoto") with rotating the workpiece in a vacuum chamber with high pressure variation (400bar) and depression (0,5mbar) for water evaporation at a temperature of 45 ° C, filtering and dosage device for liquids, automatic loading and unloading by means of a robot "gantry".	Camex Resolution	51
8424.89.90	13	Machines for applying powdered metal coils in electrical capacitors, by means of bonding by hot molten metal projections (or acetylenic torches oxy-arc combined with compressed air).	Camex Resolution	51
8424.89.90	127	nozzles, pumps, submersible electromagnetic valves, underwater projectors multicolored, anemometric control system, control panel with electronic control boards pumps, lighting and solenoid valves, overcurrent protection and escape to land, counters with programmable logic controller (PLC) microprocessor.	Camex Resolution	51
8424.89.90	154	machines Combinations painting installation complement and / or sealant composed of: one or more robots 3 or more degrees of freedom, with their respective modular control panels and assembly of control panels with their respective sources power coupled or independent, with or without remote control; Security system for preventing unauthorized entries in the desktop, with or without individual or shared translatory track, with or without temperature control of the materials applied with or without a positioning system.	Camex Resolution	51
8424.89.90	222	Machines for applying enamel comprising automatic pistols "airless" control panel with "touchscreen", stainless steel booth, spray antiexcesso network and application kit (hoses and welding guns).	Camex Resolution	51

8424.89.90	270	degrees of freedom, load capacity equal or superior to 4 kg, with rotary electrostatic paint atomizer, with a maximum rotation range 60.000rpm, one or more control panels and power, one or more pneumatic panels and high voltage, with portable programming unit, one or more gear pumps and cables.	Camex Resolution	51
8424.89.90	294	with a capacity of up to 38 bodies per hour, consisting of: 6 industrial robots, each with 2 PVC compound application nozzle with six or more degrees of freedom, 1 linear degree of freedom (rail) with load capacity exceeding 4kg; with camera system for application of precision control; 6 with pneumatic pumps (one for each robot) that supply the robots with PVC compound; with temperature control; 7 with electrical panels; 6 controllers; 6 portable programming terminal; with interconnection and security system cables.	Camex Resolution	51
8424.90.90	28	filter in the water inlet with continuous self-cleaning mechanism of the input filter, operating pressure comprised between 0.8 and 3,5bar nominal flow rate equal to 1.05 l / h, or 1.35 l / h, or 1.60 l / h, or 1.75 l / h, or 2.35 l / h, or 3.60 l / h, or 3.75 l / h, with nominal diameters of 12, or 16, or 17, or 20mm.	Camex Resolution	51
8424.90.90	29	Cylindrical adjustable drippers with the water inlet filter with continuous self-cleaning mechanism of the input filter, operating pressure comprised between 0.8 and 3,5bar nominal flow rate equal to 1.05 l / hr, or 1, 20 l / h, or 1.60 l / h, or 2.20 l / h, or 3.60 l / h, with nominal diameters of 12mm, or 16mm, or 17mm, or 20mm.	Camex Resolution	51
8424.90.90	30	Adjustable non-cylindrical dripper, with filter water inlet labyrinth for turbulent flow of water nominal flow, pressure 1 bar, not less than 0.70 l / h and less than or equal to 8 l / h, with diameters nominal 12, or 16, or 20mm.	Camex Resolution	51
8424.90.90	31	Drippers planes, in autocompensantes pressures ranging from 0.5 to 3,5bar with filter water inlet, with nominal flow rate equal to 1 liter / minute, or 1.5 liters / hour, or 2 liters / minute.	Camex Resolution	51
8424.90.90	32	For atomizing bells, with a diameter of 35 to 80mm, made of aluminum, stainless steel or titanium, with or without slots in the rim, to be mounted on rotatable turbine nozzles.	Camex Resolution	51
8424.90.90	42	Drip planes with filter with water inlet nominal flow rate, the pressure between 1 and 1,2bar equal to 1,0L / h or 1.5 L / hr, or 2.0 L / h.	Camex Resolution	51
8425.39.90	60	Tugs (special winches) capacity less than 280T, equipped with trunnion pin system as tow hitch, designed for mounting on chassis off-road trucks to haul and transport trucks off-road ability not less than 240t.	Camex Resolution	51
8426.12.00	3	Self-propelled carriers for tires, "straddle carrier type" load-lifting capacity between 20 and 80t, with steering and elevation hydraulic cab and the operator mechanism to the ground level.	Camex Resolution	51
8426.41.90	52	self-propelled cranes on tires, driven by diesel engine minimum output of 224kW, with load capacity of 45t, equipped with hydraulic telescopic boom with "spreader" themselves for lifting, transportation and storage of containers of 20 and 40 feet, equipped with system fault identification, through control modules interconnected by cables type system "can bus" with maximum wheelbase between 6,200 and 6.500mm.	Camex Resolution	51
8426.41.90	81	self-propelled cranes on wheels, powered by rechargeable electric battery of 48V, 500A and 8 hours of autonomy to drive 2 installed electric motors directly on the axes of 3kW 48V AC equipment and hydraulic pump for opening telescopic boom 9kW 48V AC, with 3.200kg capacity, fixed to the rear of the vehicle; used for lifting, transportation and storage of cargo, remotely controlled via radio frequency with time electronic display system in the "display".	Camex Resolution	51



8426.49.90	55	gauge equal or greater than 2.400mm and a minimum distance of 490mm below the car soil, equipped with cabin with hydraulic lift, industrial articulated front attachment (boom and stick) to a range equal to or higher 9m (at ground level) and equipped or not with work tools, such as hydraulic clutches (various uses), electromagnet, "clamshell" and hydraulic shears, etc., driven by diesel engine with power less than 135hp and maximum operating weight of 23.500kg.	Camex Resolution	51
8427.10.19	4	counterbalanced, the maximum load capacity of 1.750 to 5.500kg, with a tower 2, 3 and 4 stages, maximum height of lifting forks between 2.50 to 13,0m .	Camex Resolution	51
8427.10.19	20	load capacity of between 600 and 1.361kg, with a tower 2, 3 or 4 stages, with the chassis width of 1.016mm, the height of the extraction battery rollers relative the ground 182 to 184mm, operator's cab height in relation to 2.042mm platform.	Camex Resolution	51
8427.10.19	28	Forklift retractable self-propelled, electric motor AC traction (AC) with run system with superelastic tires that allows external operations in asphalt and uneven surfaces, maximum load capacity of 1,600 or 2,000 kg, the maximum lifting height of the forks 2,900 and 7.400mm (including limits).	Camex Resolution	51
8427.10.19	30	electric motor (CA) 6,9kW fed by 48V battery, the maximum capacity load of 1,000 or 1.250kg, maximum lifting height of the forks 3,000 and 7.000mm (including limits).	Camex Resolution	51
8427.10.19	31	powered by battery 80V, maximum load capacity of 1,200 or 1,500 kg, maximum lift height of the forks between 3,000 and 13.000mm (including limits ).	Camex Resolution	51
8427.10.19	33	Forklift retractable self-propelled multi-directional profile and to carry long loads, electric motor AC traction (AC) load capacity of 2,000 or 2,500 kg, the maximum lifting height of the forks between 4.250 and 10.700mm (including limits).	Camex Resolution	51
8427.10.19	34	Electric forklifts trilateral, with maximum load capacity of up to 1,500 kg and maximum lift height of the forks to 18.000mm.	Camex Resolution	51
8427.10.19	42	Forklift self-propelled, the AC traction electric motor (AC), in 3 stages 80V, counterbalanced, the maximum load capacity of between 6,000 and 8.000kg, maximum lifting height of the forks of between 2.705 and 8.670mm, the maximum speed up to 17km / h with or without forks.	Camex Resolution	51
8427.10.19	122	Trilateral forklift electrical, self-propelled, with tractive lifting device and alternating current (AC) regenerative fed by drum 48, 72 or 80V, the maximum load capacity equal to or greater than 1.360kg, but less than or equal to 1,500 kg, height maximum lifting forks exceeding 4.900mm, but less than or equal to 17.145mm, ground clearance of 45 mm between axes, with monolithic main tower 2 or 3 stage and secondary stage tower 1 with less than or equal rotation 180 ° with operator sitting in lifting platform embedded in selectable positions front, side and standing.	Camex Resolution	51
8427.10.19	123	counterbalanced lateral outlet for battery maximum capacity between 1800 and 5.500kg (including limits), with or without lifting towers 3 versions, maximum lifting height Fork between 2.750 and 7.500mm (including limits).	Camex Resolution	51
8427.10.19	132	Self-propelled stackers, electric motor and alternating current (AC), counterbalanced, with load capacity of 1.700kg and 5.500kg, with tower 2 or 3 stages and driven commands levers or mini-levers. (Wording given by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51

8427.10.19	133	fixed mast with all driven wheels, one or more tensioned, each by an electric motor, and contains an electric motor-driven hydraulic pump with capacity loads between 1,500 and 20.000kg (including these limits) with forks length up to 2,000 mm, with up to 1,000 mm load center, hydraulic lifting mast with the maximum height of the forks up to 12.500mm with all electric motors powered by energy tracionaria battery with a voltage between 24 and 80V (including these limits).	Camex Resolution	51
8427.10.90	85	Selectors vertical applications, self-propelled, the AC traction electric motor (AC) with cabin for the operator on board coupled to the raisable mast maximum load capacity of 1,000 or 1,200 kg, the maximum lifting height of the forks between 1,000 and 9,500 mm (limits included).	Camex Resolution	51
8427.10.90	112	Aerial work platforms, with retractable main column, driven by an electric motor powered by rechargeable batteries self-propelled on drive wheels 4 x 2, controlled by "joystick" and CLP, with maximum vertical lift of up to 2,900m platform (fully extended) an occupant capacity, maximum inclination shift completely retracted 35% load capacity of the basket up to 180kg, fitted or not applying device for ceiling panels.	Camex Resolution	51
8427.10.90	113	Aerial work platforms, with retractable main column, driven by an electric motor powered by rechargeable batteries self-propelled on drive wheels 4 x 2, maximum speed pickup direction 3km / h, top speed of direction raised 0.6km / h, controlled by " joystick "and CLP with the maximum vertical lift platform up to 4,620m (fully extended), maximum working height (platform and operator) 6.620mm, an occupant capacity, maximum inclination fully retracted offset 35% of load capacity the basket up to 280kg.	Camex Resolution	51
8427.10.90	145	automatic steering correction sensors, and detection of obstacles with a remote control system that allows the operator to control the machine remotely, operator embarked on foot and in a central position, capacity maximum load greater than or equal to 2.720kg (6.000lb) but less than or equal to 3.625kg (8.000lb), maximum lifting height of the forks 235 mm (9.25 ") width of the outer forks exceeding 560mm ( 22 ") but not exceeding 710mm (28"), compliance with the forks exceeding 915mm (36 ") but less than or equal to 3.660mm (144").	Camex Resolution	51
8427.20.10	4	power of 261kW, electronic transmission with four forward gears and four reverse, provided with hydraulic tower duplex telescopic type, enabling forward tilt angle of 5 ° and back to 10 ° by hydraulic cylinders 2; tower with minimum elevation of between 4.000 and 7.000mm relative to the ground; hydraulic shifting and positioning of the forks with magnetic devices; hydraulic oil tank separate from the main brake system hydraulic oil tank; failure reporting system; maintenance interval indication via the display; central automatic lubrication; suitable for moving heavy loads in general, with a lifting capacity between the forks 37 and 45 tons at a load center of 1.200mm, with a maximum between axes between 5.000 and 5.500mm.	Camex Resolution	51
8427.20.10	16	specialized forklifts in empty containers of 20 and 40, "driven by power diesel engine of 164 or 174kW, with a carrying capacity of between 8 and 10 tonnes, equipped with duplex hydraulic tower more" spreader ", suitable for lifting, transportation and storage container 20 and 40pés with wheelbase "Wheel Base" of 4.550mm long, 380L fuel tank and container counter moved with function "reset".	Camex Resolution	51

8427.20.10	34	between 160 and 261kW, electronic transmission, provided with hydraulic telescopic type duplex tower, tower elevation with minimal comprised between 4.000 and 8.000mm relative to the ground, hydraulic shifting and positioning of forks, the hydraulic oil tank separate brake system main hydraulic oil tank, failure of communication systems via the system "Canbus" indicating maintenance intervals via the display, suitable for moving heavy loads in general, capable of lifting the forks 18 and 52T between a center of load 1.200mm, with a maximum between axes between 4,000 and 6,000 mm.	Camex Resolution	51
8427.20.90	147	Forklift self-propelled, powered by a gasoline engine, diesel or LPG (liquefied petroleum gas) for lifting, transportation and storage of cargo, load-handling capacity between 4,000 and 6.000kg, with or without a yoke (Wording Camex Resolution No. 73 OF 05 OF 2018 Outubro)	Camex Resolution	51
8427.20.90	176	Vehicle platform lift for aerial work, scissor with sliding type platform (with "slider") or non-slip type (no "slider"), self-propelled wheeled, articulated, driven by diesel engine cooled water, power less than 170hp (127kW), with a load capacity up to 2.720kg, maximum elevation range of 4.2m in height and equipped with telescopic ladder for easy access to the platform.	Camex Resolution	51
8428.20.90	7	Transport equipment the vacuum superabsorbent polymer mass density of 0,78kg / L and diameter of 100 to 700µm, with 15,7dm <sup>3</sup> capacity, equipped with: Vacuum generator separator tank, manufactured filters with PTFE membrane device and about to leave.	Camex Resolution	51
8428.39.90	99	automatic transfer equipment between lines, mounted on a single shaft and boots mounted to a drive wheel for a 180 ° with 7.000aves / hour capacity.	Camex Resolution	51
8428.39.90	163	Conveyor / cooler wheat flour tortillas, with cooling capacity 720unidades / m (39 grams and 18 cm in diameter each), 11 levels, the transfer elements in turn, belt 54 "wide, 25 feet (length) , 460V, three-phase 60Hz.	Camex Resolution	51
8428.39.90	164	Equipment counters and stackers flour tortillas with a production capacity of 900 tortilla units per minute (diameter 25cm), and 600 mass units per minute (diameter 18 cm), equipped with: programmed switching system controlled by PLC, cavities oscillating collector of 10 feet accumulator conveyor, independent control of tracks, electrically actuated switching rails, electrical panel, linear actuators, discharge conveyor, photoelectric system, plate compressor, automatic transfer device and transfer conveyor 90 degrees, powered by an energy source 460 volt, three phase and 60 Hz.	Camex Resolution	51
8428.39.90	165	cardboard, with a minimum diameter of 18mm and a maximum of 50mm and height of 40mm and a maximum of 110mm; Mechanical speed up 20.000frascos / hour and maximum 20ciclos / min; with stainless steel panels also surface in stainless steel with perimeter collection tank cleaning; with the tray up to 310 x 500mm; installed power: 0,7kW; standard voltage: 220V.	Camex Resolution	51
8428.39.90	166	sausages or similar products inside the cavities trays or directly wrapping produced by thermoforming with a maximum capacity of 30.000salsichas / hour, with stainless steel structure, consisting of: 1 centrifugal table, one system of conveyor belts, one with portal handling module with mechanical arm or robot to pick up and place the sausages, controlled by one industrial PC with command screen "touch screen" 12.1 "color, positioned in a movable arm.	Camex Resolution	51
8428.40.00	1	Stairs or moving walkways equipped machine with electric motor AC, three phase, synchronous, permanent magnet and actuation and / or operation at rated speed or reduced through voltage frequency converter and frequency variables (drive VVVF) regenerative electricity.	Camex Resolution	51

8428.40.00	2	sensors that monitor a maximum of 6 points of contact and system that derives all of these areas with the lubrication time and exact and required amount.	Camex Resolution	51
8428.40.00	6	Escalators or moving walks machine equipped with electric motor of three-phase alternating current, to drive and / or working at rated speed or reduced by inverter frequency and voltage variable frequency (VVVF Drive), moving velocity from 0.2 to 0,75m / s, tilt angle from 0 to 12 ° mats and to 30 to 35 ° for stairs, constant lubrication system of the intelligent streams, security monitoring sensors panel with programmable logic control (PLC).	Camex Resolution	51
8428.90.90	50	Combinations of machines for loading and unloading of autoclaves, non-continuous action, for handling products packaged in cartons autoclavable with programmable logic controller (PLC) with a minimum capacity of 6,000 and a maximum of 12.000unidades / hour, consisting of: conveyor input, palletizer, depalletizer and output conveyor.	Camex Resolution	51
8428.90.90	60	printed products, to be used in the output binding machines and / or packaging.	Camex Resolution	51
8428.90.90	168	Feeder metal bars for loading lathe by means of hydraulically operated piston-pusher with up to 6 bars.	Camex Resolution	51
8428.90.90	171	automatic power Magazines bars, tubes and profiles, for machine tools that work with metals moving bars, equipped with hydraulic injection with guide channel and the option to sync the device to work with the tailstock lathes.	Camex Resolution	51
8428.90.90	260	capacity equal to 9caixas / min and dimensions of pallet equal to 800 x 1,200 mm.	Camex Resolution	51
8428.90.90	261	Automatic machines for handling and storage of ceramic coating, burnt or raw, with a capacity exceeding 15.000m <sup>2</sup> / day, provided preparer queue, load and unloading of the storage machines in cestones conducted by TGV - automatically guided vehicles and to roleiras loading and / or unloading the ovens.	Camex Resolution	51
8428.90.90	266	Positioners parts for welding / positioner servocontrolado or triggered manually with motorized swivel.	Camex Resolution	51
8428.90.90	278	Feeder leathers for automatic promotion from the stretching machine to machine to dry hides by parallel tables.	Camex Resolution	51
8428.90.90	285	bagging machines, with adjustments for different size bags with programmable logic controller (PLC) with capacity equal to or exceeding 800sacos / h.	Camex Resolution	51
8428.90.90	286	Aerial work platforms designed for one occupant, no pantograph, manual propulsion with hydraulic telescopic rod vertical column with a maximum working height (platform and operator) to 4.168mm, with the drive shaft by an electric motor powered by battery 1 rechargeable 12V and 85Ah capacity, for use between aisles of supermarket shelves and warehouses, top table for goods weighing up to 90kg and lower base for operator support weighing less than or equal to 130 kg.	Camex Resolution	51
8428.90.90	356	Magazines automatically feeding bars, tubes and profiles, to machine tools, transfer system with the magazine bar feed point for the lifting and tipping, provided with retractable arranged to the rear or lateral displacement.	Camex Resolution	51
8428.90.90	361	varying between 136 and 272kg, suitable for mounting on road vehicles, with electrical isolation to 46kV, with working height varying between 12.6 and 16,9m with side range may vary between 8 and 9,4m, with the bucket rotation system 180 for maintenance activities on the distribution of power lines.	Camex Resolution	51

8428.90.90	366	storage and manipulation of single doses and / or original packaging and individual / combined separation (prescription) drugs, with storage system spirals and / or boxes with "software" of complete management responsible for inventory control (amount, validity and refueling), automatic storage of unit dose packages supplied in the charging pins and / or storage boxes and separation spirals drugs and / or boxes through a Cartesian robot, able to manage prescriptions per patient, by sector and by time, assembly of prescriptions in automatic, with or without clipping system to clipar combination of several drugs with the impression of its prescription, with track system and / or drawers for delivery of the requested medications and prescriptions. (Wording given by OCTOBER CAMEX RESOLUTION No. 81 OF 17 2017)	Camex Resolution	51
8428.90.90	420	automatic palletising machines, portal type, towards ceramic coatings packaging boxes with robotic loading gripper rotation of 270 ° and with a load capacity of 250 kg, for movement with 4 axes independently controlled with boxes carriers, with 10 positions pallets, computer programming and interface with programmable logical controller (PLC).	Camex Resolution	51
8428.90.90	421	automatic palletization palletizers to organization and multi-layered multiple sizes of aluminum cans with a nominal capacity of up 4.000latas / minute, with fully automated cycle, controlled by PLC (Programmable Logic Controller). (Wording by resolution 30 of 30 DECEMBER 2019)	Camex Resolution	51
8428.90.90	422	Combinations of machines for automatic processing of cardboard boxes after printing, die cutting, for up 12.000ciclos / hour, consisting of: forming station boxes packets; 2 smooth drive shifters for no compromise training packages with nominal widths equal to 3.302mm; battery packages with 90 ° offset, with dimensions equal to 3.302 x 2.337mm; posting station corrugated plates positioned on packages, for packages with maximum dimensions equal to 2.337 x 1.016 x 406mm, with retractable conveyors and power output; management system with PLC and "software" dedicated.	Camex Resolution	51
8428.90.90	423	Combinations of machines for loading and unloading rods for automotive engines milling machines, consisting of: from 2 to 9 robots; mats; camera systems for identification of parts or models; with integration of machines with side ability to identify and position the rod with 4 seconds per rod processing capacity software. (Wording given by CAMEX RESOLUTION No. 90 OF 13 OF DECEMBER 2017)	Camex Resolution	51
8429.11.90	1	Bulldozers mats with maximum power on the wheel less than 405HP, with servo type "power shift".	Camex Resolution	51
8429.40.00	16	Rollers soil compactors and / or asphalt, self propelled, dual tandem cylinder, with maximum working width of 1.430mm and operating weight comprised between 3,700 and 5.300kg.	Camex Resolution	51
8429.40.00	17	vibration, equipped with a diesel engine with an output of 155kW with a maximum working width of 2.220mm and a maximum operating weight of more than 19.800kg.	Camex Resolution	51
8429.51.99	6	Self-propelled vehicles of the skid steer loader type wheels, driven by diesel engine net power (the wheel) between 70 and 84HP, 4WD with front lift arm, loading and attach implements, auxiliary hydraulic system and operational load to 3.000lb (1.361kg).	Camex Resolution	51
8429.51.99	24	Wheel loaders, self-propelled, diesel engine, transmission "powershift" planetary, gross power of 449HP (335kW), weight in operating 48.429kg (106.768lb), bucket capacity of 5 to 8,4m3 (6.5 to 11yd³).	Camex Resolution	51

8429.52.19	5	Excavators self-propelled, with a superstructure capable of performing a 360 ° rotation, consisting of alternating current electric motors for propulsion, turning and lifting system, with drive of the loading hopper lift system by means of cables and maximum load capacity equal to or greater than 19m3.	Camex Resolution	51
8430.10.00	39	mm, maximum impact frequency 40golpes / min impact energy between 101 and 127kNm and pestle weighing between 7 and 9 tonnes, equipped with hydraulic unit ( "power pack ") for supplying power to the hydraulic hammer, with a maximum power of 242kW and 212 (288 and 329HP) between 1,800 and maximum frequency 2.200rpm, maximum hydraulic flow between 290 and 396L / min and a maximum operating pressure of 350bar. ( amended by NOVEMBER CAMEX RESOLUTION No. 85 OF 09 OF 2018)	Camex Resolution	51
8430.41.20	3	equal or superior to 425hp with hydraulic feed system with a maximum weight on the drill between 11,300 to 34.100kg to diameter holes exceeding 102mm.	Camex Resolution	51
8430.41.20	21	Rotary drilling, self-propelled crawler, equipped with hydraulic feed system with weight on the drill 56.700kg, with head up torque variation 25.700Nm, air compressor with a flow rate of between 84.9 and 107,6m3 / min and equal pressure or below 110psi.	Camex Resolution	51
8430.41.20	23	equal to or higher than 700HP, hydraulic feed system with a maximum weight on the drill and 34.100kg of from 27,000 to diameter holes exceeding 149mm.	Camex Resolution	51
8430.41.90	2	Machines for rock drilling, with articulated chassis, self-propelled, wheeled, with one or more hydraulic arms provided with drills rotopercussivas.	Camex Resolution	51
8430.41.90	3	wheeled, equipped with two independent arms, one arm for drilling, equipped with drill to bore holes between 48 and 89mm, and another arm for the cable installation steel with articulated chassis and automatic drilling and installation system.	Camex Resolution	51
8430.41.90	10	Machine for drilling rocks and installation of rods with articulated chassis, self-propelled wheeled, with a hydraulic arm provided with drill rods and installation system in underground mines.	Camex Resolution	51
8430.41.90	14	Rotary drilling, self-propelled on wheels equipped with rotating impact head bottom (DTH) to holes with depth equal to or exceeding 40 meters with a diameter of between 103 and 254mm, with auxiliary winch and compressor unit pressure of 350psi.	Camex Resolution	51
8430.41.90	16	Machines for rock drilling, with rigid chassis, self-propelling wheeled, displacement engine power 148HP (110kW) with one or more arms for positioning rotopercussiva hydraulic rock drill for hole diameters of 45 to 64mm and depth equal to or greater to 4.050mm.	Camex Resolution	51
8430.41.90	27	Drilling soil, self-propelled crawler, the rotary type with bottom impact (DTH) diesel engine with a power of between 425 and 950HP, maximum weight on the drill between 11,300 and 42.000kg, equipped with air compressor, diameter holes to not less than 102mm.	Camex Resolution	51
8430.41.90	52	articulated chassis, equipped with enclosed cab with 290 ° rotating with displacement performed by diesel engine, used for rock drilling in mines or underground works the hole diameter of up to 0.75 meters opening free faces ( "slot raises") with feed force 700kN, equipped with crane for handling of drill rods, with a storage capacity of 18 board drilling rods the equipment.	Camex Resolution	51
8430.50.00	2	Equipment self-propelled articulated and demoted, equipped with blade "bulldozer" and telescopic arm with claw for moving loose rocks on the roof of underground mines.	Camex Resolution	51

8430.50.00	7	Equipment self-propelled articulated, equipped with blade "bulldozer" and articulated arm with hydraulic hammer, for displacing loose rocks on the roof of underground mines.	Camex Resolution	51
8430.50.00	36	self-propelled machines on four wheels, with articulated chassis and directional front axle, for wet concrete projection underground, underground mines and tunnels of small sections and medium with built-in projection arm in the driving structure with rotation of 270 ° arm, 2200 mm in length and elevation from -20 to + 75 °, maximum range of front projection 8m, theoretical capacity of concrete pumping from 4 to 27m <sup>3</sup> / hour, operating cab with FOPS certification (rockfall protection) and ROPS ( rollover protection) and CAN bus system control design process.	Camex Resolution	51
8431.20.11	26	External beams in HC-103 steel with tensile strength 78.000psi, maximum torque of 0.3 ° / 10,000 180,3mm dimensions of width, height 70mm, 2.596mm long, 112,5mm opening for passage rollers, tolerance of 0.1mm wall thickness with 24,8mm.	Camex Resolution	51
8431.20.11	27	arm sets "mini-lever" for moving pallets with electrical control handles for moving, tilting and elevation with CAN bus communication system, dimensions of 523mm in length, 168mm in height and width 170,3mm.	Camex Resolution	51
8431.31.10	7	toothed belts used as traction elements for exclusive use in elevators.	Camex Resolution	51
8431.31.10	17	Bumpers for hydraulic elevators with speeds ranging from 1.5 to 1.8 m / sec, 2 to 2.3 m / sec, 2.5 to 2.9m / sec, 1.25 to 1.45m / sec, with volumes use of oil comprised between 1.4 and 4,5litros, minimum load capacity and maximum 600kgf 4.545kgf with electrical contact mounted for use in elevators with speeds ranging from 90 to 150m / min.	Camex Resolution	51
8431.31.10	29	Bumpers for hydraulic elevators with speeds ranging from 3 to 5,08m / s, oil volume in use of between 11.51 and 37.19 liters, a minimum of 646kgf load capacity and maximum 5.000kgf with electrical contact mounted for use in elevators with speed ranging from 180 to 305m / min.	Camex Resolution	51
8431.31.10	57	Electronic devices for indicating position and displacement elevators with "display" alphanumeric matrix 16 x 32 2 or 3 digits, plastic and glass structure width between 40 and 65mm and length of 290mm, degree of IPX3 or IP21 protection module electronic SMD with supply voltage of 18 to 27,6VDC and communication "BIO BUS", sound signaling and light fire, overcrowding, faulty or exclusive use.	Camex Resolution	51
8431.31.10	58	degree of IPX3 protective or IP21, plastic structure, metal and glass, width between 65 and 290mm and a length between 130 and 290mm, electronics module MDS with supply voltage 18 to 27 , 6VDC and communication BIO BUS, matrix alphanumeric display 16 x 32 with 2 or 3 digits, position indicator and shift, sound signaling and light fire, overcrowding, faulty or exclusive use.	Camex Resolution	51
8431.31.90	4	"Pallets" (floors) for crawler in aluminum alloy.	Camex Resolution	51
8431.31.90	7	Step for escalators aluminum alloy.	Camex Resolution	51
8431.49.10	12	lifting equipment to vertically move the load hook of tower cranes through 2 or 4 wire rope falls, with maximum speed of 80m / min, maximum load capacity of 5,000 kg, equipped with electric motor with an output of 22kW nominal and maximum torque of 140Nm 1.500rpm rotation, a static brake with nominal torque of 260nm, a planetary gear unit with a maximum torque 4.746Nm, maximum rotation 4.500rpm, reduction ratio 1: 32,067, with a drum capacity winding of 556m.	Camex Resolution	51

8431.49.10	13	Equipment to produce turning movements at the top of tower cranes, equipped with electric motor with a power of 5 kW, nominal torque and maximum speed of 35,6Nm 1.250rpm, a static brake with nominal torque of 70N, a planetary gear unit with torque 9.100Nm maximum, maximum rotation 1.250rpm and reduction ratio of 1: 152.	Camex Resolution	51
8431.49.10	14	translation equipment to move horizontally the loading carts tower crane hooks on the boom by means of steel cables, equipped with an electric motor with a power of 3 kW, maximum rotation 1.730rpm static brake with nominal torque of 14nm, reducing torque with up to 770nm, reduction ratio 1: 43.9, with nominal barrel diameter of 352mm to 8mm diameter cables.	Camex Resolution	51
8433.20.90	5	cutting surfaces of rotating disks, to be applied to self-propelled forage for cutting standing crop-sized high and low as corn, sorghum, oats and others, with working width less than 4.5 m cutting in any direction ( online or not) with rotating discs drums cutting, cutting discs with tungsten coating, the main transmission drive shaft, transmission to the cutting discs held by boxes in oil bath with safety clutches, cutting discs lower stalk shredder with hydraulic lock of the side sections for ease of transportation.	Camex Resolution	51
8433.20.90	10	provided with basket storage chips with a capacity of up to 1,400 liters with level sensor chips or no seat for the driver, four tires platform with hydraulic and width increase cutting of up to 1.80 meters, blades for cutting and shredding of grass, hydrostatic drive system with variable pump control, exclusive hydraulic lifting truck with up to 2.20 meters tall, cabin air conditioning or not.	Camex Resolution	51
8433.40.00	1	Balers for giant bales of hay, tensioned, with production of rectangular bales 0,875m high by 1.2m wide, with variable length up to 2,75m, weight up to 730kg, with the density variation management system, adjust controlled electronically via monitor, mooring system with us double.	Camex Resolution	51
8433.40.00	14	Pick-up balers for straw or fodder, not self- propelled, tensioned by a tractor, for forming large cylindrical bales (with diameter between 810 and 1.830mm, the maximum width of between 1.170 and 1.570mm and a maximum weight of between 990 and 1.100kg) controlled by electronic control monitor with large capacity collector (between 1.800 and 2.210mm external width), bale density setting through control valve, 6 or 8 bale forming belts, equipped bale closure system mooring wired or by network.	Camex Resolution	51
8433.40.00	27	Pick-up balers for straw or fodder, not self- propelled, tensioned by a tractor, for forming large prismatic bales (with maximum dimensions of 120 cm width, 90cm in height and adjustable length of 60cm to a maximum of 300cm), provided with large capacity collector with working width of 230cm, equipped with electronic control monitor.	Camex Resolution	51
8433.40.00	35	knives (protected by springs or hydraulic system), work with cane crop residues, enfardam wet or dry material, producing bales of 0.7 to 0.9 m height, 0.8 to 1.2 m in width and length 0.6 to 3m, with the density adjustment system via control monitor with us double or single mooring system with integral rotor technology located after the platform pickup, frontal and with or without chopper.	Camex Resolution	51
8433.59.90	36	Automatic tobacco leaf harvesters (low and middle foot), 4-wheel and 4 lines with rear discharge system, 120cm distance between lines with high torque diesel engine of 4.500cc and the maximum power 173HP 2.400rpm , 4-wheel drive and differential lock system to prevent sliding, rear basket for the collection and storage of tobacco with a capacity between 26 and 30m³.	Camex Resolution	51



8433.59.90	37	Harvesting tobacco leaves (low / middle foot), 3 and 2 lines wheels, rear discharge system tobacco, adjustable distance between streets between 117 and 122cm, high torque diesel engine, with a cylinder capacity exceeding 4.500cc, maximum power equal to or greater than 86kW; traction on 3 wheels; slip differential lock system to avoid sliding; Storage basket for tobacco with a volume between 10 and 14m <sup>3</sup> .	Camex Resolution	51
8433.59.90	38	automatic tobacco harvesters end leaves (high standing), 4-wheel and 4 rows, back flushing system tobacco, 120cm distance between lines with high torque diesel engine of 4.500cc and the maximum power 173HP 2.400rpm, 4-wheel drive and differential lock system to prevent sliding, rear basket for the collection and storage of tobacco with a volume between 30 and 36 m <sup>3</sup> .	Camex Resolution	51
8433.60.29	8	Machines for wrapping eggs for the whole egg production or separated egg yolk and with a maximum capacity of 21,600 to 135.000ovos / hour, with washer, exit to the shells, control panel and conveyor belts.	Camex Resolution	51
8434.10.00	2	3.200L / day capacity, self-cleaning process for sanitizing with module for cleaning and preparation ceilings brushless water based, with computerized control for herd management, composed of 1 equipment in stainless steel for automatic milk collection through hydraulic arm; 1 module for filtering milk of 112 l / h capacity; 1 unit Automatic milk separation; 1 vacuum pump with a capacity ranging 800 to 1,000 l / min at pressure of 42 to 45kPa, with variable frequency and toilet tank; pipes, seals and fittings made of stainless steel and PVC.	Camex Resolution	51
8434.10.00	10	80 milking stations, working on a "non-stop" with automatic selection system of animals and automated sample collection system for milk quality control , equipped with: galvanized steel base turntable for filling with concrete, installed on a nylon pulley system without bearings on rail system "I" double, with electric drive / hydraulic positioning arm for adjusting the set of milking, milking system controller for automatic extraction and measuring the volume and conductivity of milk pulsation system and providing vacuum automatic cleaning system of the milking machine, the milk transport system consisting of pipes and stainless steel tanks with device rotary coupling to transfer to the storage room and preservation of milk, identification system and manage Herd then for "tag" detached, recognition 360 ° by "encoder" and automatic control of the platform turning speed, until the cows are completely milked by "SpeedControl" system, with or without automatic feeding system, controlled by the control panel with LCD screen that displays all process information.	Camex Resolution	51
8434.10.00	11	comprising: 1 "box" milking with system of automatic adjustment length of the "box" to the animal size, a milk collection unit for a vacuum system provided with transport pipeline and storage tank lung, automatic separation device marketable milk, non-marketable and milk for calves, automated sample separation system, a robot equipped with 3D camera with optical sensor for automatic execution of the functions of cleaning ceilings, disinfection and automatic positioning of teat cups on the cow's udder, automatic rinsing and cleaning of the "box", a water treatment unit, rotary feeders, and identification system and automatic management of the herd for "tag" individual one central module for supplying compressed air, water, energy, detergent triggered by control panel "display", "touch screen", and door seleçã to condition the automated input, output identification and animal after milking.	Camex Resolution	51
8434.20.10	2	Machines for standardizing the milk fat and cream with a density sensors, flow meters, valves, control panel and a capacity greater than or equal to 10,000 liters per hour. (Composition given by CAMEX RESOLUTION No. 78 21 SEPTEMBER 2017)	Camex Resolution	51

8436.10.00	31	For preparation, mixing and dispensing animal feed for pigs, with adjustment formulas and specific amounts for each feeding point scale mixer storage tank, transporting the dry feed air stream, with electronic control, distribution up to 200m away capacity of up to 600kg per hour of dry feed, rotary distributors with optional mixing water in varying portions (dry, wet or liquid) without waste, automatic cleaning.	Camex Resolution	51
8436.29.00	35	birds weighing device; with 900kg load capacity, and may transport of poultry from 1.5 to 4.0kg; 6m long, 1.5m high, 2.2m wide, with a maximum height of 3.8m high, with horizontal movement 120mm; maximum speed of 7 km / h, and belt speed of 7 m / min; with motor 35,8kW / 48HP, two shafts and four tires.	Camex Resolution	51
8436.80.00	33	self-propelled wheeled machines for felling, delimiting and trimming of logs, with traction 4 x 4 or higher without loading platform and crane with maximum range above 8 meters.	Camex Resolution	51
8436.80.00	76	wood waste disposers or entire trees, horizontal operation under self-propelled crawler or tire equipped with diesel cycle engine 6-cylinder engine with a power of 630 to 1.050HP; Clutch engagement with push button with PTO; Automatic feeding speed control based on engine speed; wake of the current type of steel fillet; feed roller with teeth of serrated bars, exerting a crushing pressure of up to 3t; double rotor interchangeable hammers or knives segmented rotor; displacement mat with double claws and rigid frame; sieves; detachable anvil; hydraulic system; discharge conveyor 6m in height; 24V electric system; control station to display on LEDs; wireless remote control by radio frequency with a range of 91m; objects thrown security system with a variable position deflector.	Camex Resolution	51
8436.80.00	77	self-propelled forestry machines on wheels, with traction 6 x 6, with power greater than or equal to 200HP, equipped with head "harvester" and drag claw type "clambunk".	Camex Resolution	51
8436.91.00	1	automatic feeders for producing arrays of fertile eggs, provided with electronic control weighing and distribution of feed, chain conveyor or helical conformation and a reservoir for storage of feed, with a capacity of 16 birds / dish, dishes up to 366mm in diameter at a distance maximum between them comprised of 667 to 900mm, with the feed conveying speed of 36m / min and transport capacity of up to 2t / h of feed.	Camex Resolution	51
8436.99.00	4	forest heads for cutting, delimiting and successive cuts into desired lengths planted trees or reforestation, with knives upper opening of between 550 and 850mm.	Camex Resolution	51
8436.99.00	5	abeçotes forest for cutting and delimiting trees planted or reforestation.	Camex Resolution	51
8436.99.00	8	Heads type "feller" disc with constant rotation for tipping multiple planted trees or reforestation, for application in large hydraulic excavators prepared for head "feller" disk as well as on dedicated machines to the "feller" called "Fellers buncher ", containing drive the saw for axial piston motor with variable displacement, with cutting capacity between 500 and 560mm, the accumulation capacity between 0.48 and 0,70m <sup>2</sup> and the head opening 770 and between 1.300mm. (Composition given by CAMEX RESOLUTION No. 96 DECEMBER 07 OF 2018)	Camex Resolution	51
8437.80.10	9	Roller mills for grinding grains, for industrial use, with capacity up 1.550t / day, provided with rollers or rotary feeder feeder, with or without metal retaining magnet, two pairs of cylindrical rollers 16 " in diameter and 84 "long, automatically aligned hydraulic system, with or without engine capacity equal or superior to 125hp with V-belt transmission (Composition given by Camex Resolution 38 of 05 JUNE 2018)	Camex Resolution	51

8437.80.90	13	Compressor Machines for rolling or flattening of grains, industrial use, with capacity of between 400 and 700t / day and lamination with adjustable thickness between 0.008 and 0.020 ", provided with deagglomerator axis (with or without magnetic shielding), roll feeder, a pair of cylindrical precision rollers with adjustable alignment by a hydraulic system and variable pressure 400 to 800PSI, with or without engine with approximately 200HP and transmission by synchronizing belt HTD. (Composition given by CAMEX RESOLUTION No. 38 of June 05 OF 2018)	Camex Resolution	51
8438.10.00	137	with continuous kneading machines for gravimetric dosing of ingredients / volumetric system with electrical panel and mixing capacity of 700 to 2,000 kg / h, consisting of flour dispenser with a volume of 500 liters water dispenser with a volume of 50 liters, the doser baking powder 40 liters dispenser booster with a volume of 60 liters dispenser of propionate with a volume of 60 liters sugar dispenser with a volume of 60 liters powdered salt dispenser with a volume of 60 liters stainless steel vessel jacketed to the mass cooling with belt lift for the mass evacuation.	Camex Resolution	51
8438.10.00	168	Machines splitter / shaping mass for making flour tortillas, with a processing capacity of 450peças / min (pieces weighing 39-84 g), provided with dosing dual rotary mass, bidirectional mass conveyor, continuous casting transmissions, heads cavities, rotating rods, drums external / internal molding, 460V, 60Hz three-phase.	Camex Resolution	51
8438.10.00	169	mass automatic mixing machines for making flour tortillas with processing capability of mass 1.680kg / hr (7 lots mass / h - 240kg / batch) have: water meter, mixing tank / discharge water interface to the meter screen "touchscreen", stainless steel access platform, double and rotary feeder mass, lowered hopper, conveyor inclined transfer, 460V, 60Hz three-phase.	Camex Resolution	51
8438.10.00	170	prensadoras flour tortilla machine with a production capacity of 36 tortillas per pressing (with 18cm diameter and 39 grams per piece) or 16 tortillas per pressing (with 25cm diameter and 84 grams per piece), "touchscreen" display Ethernet Connectivity "software", up to 16 recipes, hot plate unloading tires servocontroles, safety sliding doors with magnetic switches, vacuum head, "" rack storage and installation charger plates and camera pressing, 460V, three phase 60Hz.	Camex Resolution	51
8438.10.00	171	Fermentation chambers for pasta flour tortilla with a production capacity of 48,000 mass units / hr (from 18 to 39 grams - format "wrap") or 21,333 mass units / hr (25 to 84 grams - "large" format) , equipped with monitor "accuview" double timer door trays, alternating loading trays, cold air injection, humidity control system and local cleaning system, powered by energy source 460V three-phase 60Hz.	Camex Resolution	51
8438.50.00	29	Grampeadoras automatic machines for closing embedded, double stapling diameter embedded between 24 and 250mm, with automatic links to support application of the product; clipping predetermined pressure, electronic control panel with LCD screen.	Camex Resolution	51

8438.50.00	186	Combinations of machines for separating half of chicken parts (top) to the carcass 1,400 2.800g, with nominal capacity of 4.200carcaças / hour, consisting of: first overhead conveyor, such as "heavy duty"; 1 set of product carriers; 1 set of positioners products chargers; 1 set of suspension portals; 1 control panel; 1 station hangs from products; 1 tensioning guide wings; 2 manual processing stations; 1 fillets incision module; 1 incisor module skin wings; 1 module for breast skin removed; One module to the back skin removed; 1 module neck fat remover; Removing module 1 of the clavicle; 1 module for separation of the back flesh; 1 module for dividing fillets; 1 module for collecting steak / wings; 1 module for cutting tendons; 1 module for separation sirloin; 1 capture module of back meat; 1 recuperator module tendons of the sternum; 1 cartilage collection module; 1 unloading station; 1 washer product chargers.	Camex Resolution	51
8438.50.00	190	double Grampeadoras automatic or semiautomatic Electropneumatic for clipping flexible natural and artificial vials, the gauge equal to or less than 115mm in diameter, with electrical and mechanical connections to fillers or pumps automatic dosing, adjustable separator system to ensure the cleanliness of the ends of the casings adjust height and pressure of clipping, endowed or not the following optional devices: automatic applicator ties, string applicator for products in a horseshoe shape, label applicator, with a brake support with pneumatic movement.	Camex Resolution	51
8438.50.00	214	Machines for final inspection of birds with 20 units with two serrated edge tubes 180 by turning unit with 13.500frangos / hour capacity.	Camex Resolution	51
8438.50.00	218	cheeses, with adjustable slice thickness between 0.1 and 50mm, with a maximum rated speed of 600ciclos / minute (depending on the slice thickness), with a circular knife 460 or 470mm diameter for products with a maximum length of 1,200 mm, servo motors and servo controllers system fitted to the precision speed and positioning, gifted or not dynamic weighing scale, rejection unit, conveyor product and plastic film collator device between slices.	Camex Resolution	51
8438.50.00	219	double Grampeadoras automatic Electropneumatic for clipping flexible natural and artificial vials in equal caliber or less than 160mm in diameter, with electrical and mechanical connections to fillers or pumps automatic dosing, adjustable separator system to ensure the cleanliness of the ends of the casings fit and high pressure stapling and predisposed for installation and coupling of the following optional devices: automatic applicator ties, string applicator for products in a horseshoe shape, and label applicator with a brake support with pneumatic movement.	Camex Resolution	51
8438.50.00	223	Equipment for cutting, mixing, and emulsify various meat products, provided with quadruple cutting assembly consisting of four disks and blades 4 supports (with each carrier strip 3 or 6) of the perforated plates with diameters exceeding 140mm; an LCD panel for automatic operation program of the cutting and cleaning position, with indication of the wear of cutting tools and the inlet and outlet temperatures of the refined product; automatic adjustment system of the cutting position (constant cutting quality) via stepper motor in combination with a PLC, driven by the main motor with power exceeding 37kW, endowed or not the hopper or the auger or vacuum pump and production capacity equal to or greater than 1.5t / h.	Camex Resolution	51
8438.50.00	225	Machines for forming nuggets, hamburgers and chicken steaks or meat by tumble system with speeds up to 30 rpm, including the drum drive system for the servomotor, mechanical system expulsion of the portions servomotor integrated lobe pump system and pivoting shell with internal power snails driven by servomotor.	Camex Resolution	51

8438.50.00	232	without the need for tools provided with product infeed conveyor, with a cutting width of 434mm, with a pressure roller, driven by electric motor 0.75kW .	Camex Resolution	51
8438.50.00	233	Computer equipment for high performance slicers cold sausages and cheeses, with adjustable slice thickness of 0.1 to 50mm, with a maximum speed of 400 / min with a circular cutting knife system, the ability to slice products with up to 800mm in length, servo motors and servo controllers system fitted to the precision speed and positioning, gifted or not dynamic weighing scale; rejection unit; the conveyor belt of the product; of the product outfeed conveyor; mat of rejected parts and plastic film collator device between the slices.	Camex Resolution	51
8438.50.00	270	Machines for cutting into cubes or strips of frozen meat products in blocks with maximum dimensions of 1.100mm x 630 x 240 or 420 x 240 x 900mm in temperature between -4 and -18 ° C, maximum processing capacity equal to or less than 4.500kg / h, with automatic belt conveyor for moving the pieces of meat and PLC type control panel. (Wording given by CAMEX RESOLUTION No. 31 OF 02 MAY 2018)	Camex Resolution	51
8438.80.90	38	with adjustable slice thickness between 0.1 and 50mm, with a maximum rated speed of 400ciclos / minute (depending on the slice thickness) and a maximum load area to 800mm product length, servo motors and servo controllers system fitted to the precision speed and positioning, gifted or not dynamic weighing scale, rejection unit and plastic film collator device between the slices.	Camex Resolution	51
8438.80.90	82	continuing to cool mixture of 50% soy and 50% corn equipment, sauce manufacturing "shoyu" controlled by programmable logic controller (PLC), with a maximum humidity of 90%, air flow 120m <sup>3</sup> / min in primary and Flow air 120m <sup>3</sup> / min secondary ability of the process to 3.000kg / h grinding (dusting) the mixing blades 15 installed at 25mm intervals.	Camex Resolution	51
8438.90.00	1	Rollers for use in machine porcionar or forming mass or whole muscle of red meat, white meat, fish or potato dough, diameter 300mm, product thickness of between 3 and 40mm, with the possibility to form 12-5 rays product, from 50 to 150mm length with 2 or 3 dimensional.	Camex Resolution	51
8439.10.30	8	autopressurizadas shredding for producing fibers from wood chips with conical feed screws and discharge with preheater digester with bidirectional valve, with a diameter of 1.100 to 2.000mm discs with higher maximum design pressure or equal to 12kgf / cm <sup>2</sup> .	Camex Resolution	51
8439.10.30	11	Grinders self-pressurized for the production of fibers from hardwood chips ( "hardwood") with conical feed screws with 360 hammer hardened steel, diameter sieve holes 14mm / 16mm with 315kW power with electro fan suction tube, dual feed system for settling cyclone hammer mill with sieves oscillatory size for extra chips with expulsion system.	Camex Resolution	51
8439.30.30	1	Heads automatic inverters for the manufacture of corrugated cardboard, with top speed of 380m / min, maximum width waving to 2.800mm.	Camex Resolution	51
8439.30.90	41	Machines for finishing digitally printed materials, such as tags and labels, working from reel to reel, for combined application of varnish on record, the total varnish, cold stamping and / or hot, overlaminating and cut semirrotativo and can rely on processing additional modules with a maximum web width 350mm, maximum speed exceeding 64m / min.	Camex Resolution	51
8439.91.00	1	cylindrical sieves (sieve baskets), with cylindrical or tapered bore diameter equal or less than 4.5mm or slots width not exceeding 1 mm, suitable for sorting machines of cellulosic fibers or fibers derived from recycled paper.	Camex Resolution	51
8439.91.00	4	Segments (circle sectors with bars and slots) for refiners discs (shredders) of fibrous cellulosic material.	Camex Resolution	51

8439.91.00	13	manufactured using mold with centrifugal movement, provided with reinforced polyurethane with triple layer of non-woven wires, with 2 strands in longitudinal direction and one yarn in the transverse direction, diameter comprised of 1,100 to 1,800 mm and length greater than or equal to 3.000mm.	Camex Resolution	51
8439.99.90	24	Rolls variable camber (bending compensation), hydraulically actuated with one or more contact zones, smaller working width or equal to 11.000mm and less than or equal speed 3000m / min, suitable for application in the manufacture of pulp and paper.	Camex Resolution	51
8439.99.90	25	Rollers or guides openers manufactured in carbon fiber with rubber coating or other polymers, used to manufacture pulp and paper.	Camex Resolution	51
8440.10.90	9	Automatic machine for stapling and cutting trilateral magazines and books, with or without bending, with or without collating, with a capacity exceeding 5.500ciclos / hour.	Camex Resolution	51
8440.10.90	10	Machines for square spine binders for the production of books with a thickness exceeding 1 mm but not exceeding 80 mm, speed exceeding 4.000exemplares / minute but less than or equal to 18.000exemplares / hour, with or without automatic adjustment format.	Camex Resolution	51
8440.10.90	17	forming hard cover books machines, comprising card supply units, power lining on the card and pressing, with a capacity exceeding 25ciclos / minute.	Camex Resolution	51
8440.10.90	35	Combinations machines for hardcover formation and placement of inner liner to be used in the graphics industry, with a speed of 65 or 100ciclos / minute, composed of: forming unit hardcover; to turn the drive unit cover and to place the inner liner.	Camex Resolution	51
8440.10.90	53	numerical control (NC), with maximum size of the book block less than 280 x 375 x 80mm, maximum output less than 1.800ciclos / hour, composed of : power station of the book block; heating season of the book block; drive to place the book upright block; rounding station of the spine and forming the crease; glue application station gauze; gluing station and reinforcement and applying cabeceado; pre-stacking station, feeding and heating of covers; assembly station on the cover of the book block; pressing station and multiple creasing, with or without stacking unit at the output with a maximum pressing force exceeding 15.000N.	Camex Resolution	51
8440.10.90	55	cutting of finished printed materials to be used in the process of manufacturing books, magazines and the like, with a maximum speed exceeding 2.500jogos / hour.	Camex Resolution	51
8440.10.90	65	Machine for gluing in hardcover books brains previously made with a maximum thickness of 80mm and equal speed 30ciclos / min.	Camex Resolution	51
8441.10.90	22	Automatic labels and cutting labels by troquelagem containing transport unit encintagem and separation packages, with a capacity equal or superior processing 10 strokes per minute.	Camex Resolution	51
8441.10.90	78	Automatic cutting by troquelagem, for cutting flat or recessed aluminum tops, lids / label paper, plastic or other composite materials, with a maximum processing capacity of 400golpes / min unwinding speed of up to 80m / min dynamic speed up to 300m / min and maximum diameter of the inlet roller to 800mm, with electric panel with touch screen (touchscreen), equipped with cart for tool and one set of special tools.	Camex Resolution	51
8441.10.90	79	Cutting tape cutting acrylic foam tapes or polyurethane 0.2 to 3.5 mm thick paper tapes and 0.1 to 0.3 mm thick, wide variations between 4 and 32 mm, with rollers 9 cross 3 levels, helper application linear width between 15 and 40mm, and speed between 25 and 200 m / min, depending on the cut width.	Camex Resolution	51

8441.30.90	44	grooves forming machinery (creases) in cardboard plates, operating at peak cycle 65components / min, the minimum plate thickness of 1mm and a maximum of 4mm.	Camex Resolution	51
8441.30.90	51	Machine tools for bending application and glue paper and paperboard, previously cut and creased and may rely on additional finishing and insertion, and for the production of pastes devices, envelopes, simple boxes, covers, among other products, the maximum speed not less than 130m / min and maximum size of material to be fed equal to or greater than 78 x 78cm.	Camex Resolution	51
8441.30.90	58	boxes, with maximum mechanical speed exceeding 26.000caixas / hour to sheets or corrugated sheets with a nominal minimum length of 360mm and a maximum nominal 1.800mm, nominal width 190mm and maximum nominal of 635mm, composed of: 1 sheet feed unit; 4 printing units of quick adjustment; 1 cutting unit and rotatable crease; 1 slot unit with four pairs of motor units with independent drive axes, and two pairs of axles and two jointers vincadores pairs of axles; 1 folding unit / splicer; Stacking unit 1, and ejection count packages.	Camex Resolution	51
8441.40.00	27	(type pound cake, "plumpy", "pie", "cup-cake," jelly roll etc.) with a maximum speed 40formas / min, provided with paper feed unit or cardboard in rolls, forming embutidora type outfeed conveyor with stacking and counting of molds and the central control unit with programmable logic controller (PLC).	Camex Resolution	51
8441.80.00	85	Automatic machines with cutting head mounted on movable portico drive system via the rack for the cutting of cardboard and cardboard and other materials used in the packaging industry or visual communication suitable for making containers, "display" or cut adhesive and labels, with a desk and a programmable control unit with a maximum speed equal to or exceeding 30 m / min, work area less than 800 x 1.100mm, maximum sheet size less than 1,000 x 1,500 mm.	Camex Resolution	51
8441.80.00	93	Machine for cutting and creasing sheet of paper and corrugated cardboard, with format understood 50cm x 65 to 166 x 120 cm, maximum speed 5.000folhas / hour, maximum cutting force of 450 tons and power of 36kw.	Camex Resolution	51
8442.30.10	4	Machines for sheet metal exposure for printing "offset", direct from the computer without using photolithography.	Camex Resolution	51
8442.30.10	7	engraving machines laser plates for flexographic printing, with or without data processing unit for its control.	Camex Resolution	51
8442.50.00	5	Screens eletroformadas, 100% nickel, nonwoven, for use in modular units of rotary screen printing, sheets with dimensions comprised between 380 and 1,000 x 640mm x 1.000mm, to be welded in a cylindrical shape with number of holes ranging between 40 and 405 holes per linear inch "mesh".	Camex Resolution	51
8443.11.90	4	printing machines, rotary, "offset", fed by coils, with or without dryer, imprinted with "blanket against blanket" and output in notebooks or folded sheets for the production of newspapers, tabloids, magazines or books.	Camex Resolution	51
8443.11.90	5	printing units "offset" for use in rotating machines fed by coils with system "blanket against blanket" for the production of newspapers, tabloids, magazines or books, with maximum speed less than 20.000folhas / hour.	Camex Resolution	51
8443.11.90	10	Combinations machines stamping process synthetic polyurethane laminates composed of: 1 biaxial unwinding machine; 1 hydraulic accumulator tissue for up to 30m wide x 1,700mm; 3 printing machines with 1 steel cylinder; 1 drying oven with hot air of 18m length, with heating to 230 ° C; 1 platform; 1 the water cooling system with four steel drums; 1 central winding; 1 electrical panel and control box.	Camex Resolution	51

8443.11.90	11	polyurethane laminates applicator polyurethane resin solution layer, composed of: 1 biaxial unwinding machine; 1 hydraulic accumulator tissue for up to 30m wide x 1,700mm; 3 printing machine with 1 steel cylinder; 1 drying oven with hot air of 18m length, with heating to 230 ° C; 1 platform; 1 the water cooling system with four steel drums; 1 central winding; 1 electrical panel and control box; 1 head application of polyurethane resin solution layer with steel cylinder.	Camex Resolution	51
8443.13.29	11	Printers "offset" fed by maximum size sheets of less than 37.5 x 51cm, for one or more colors, with a maximum capacity equal to or greater than 10.000folhas / hour.	Camex Resolution	51
8443.13.90	2	Printers "offset" fed by maximum size sheets of less than 37.5 x 51cm, for one or more colors, with a maximum capacity equal to or greater than 11.000folhas / hour.	Camex Resolution	51
8443.13.90	7	Printers fed offset by maximum size sheet than or equal to 37 x 52cm, for one or more colors, with a capacity equal to or greater than 13,000 sheets per hour, with power system through a single suction belt and adjust automatic margeador .	Camex Resolution	51
8443.13.90	13	offset printers fed by sheets of maximum size equal to or exceeding 370 x 520mm for one or more colors, a capacity equal or higher printing 13.000folhas / hour and power system through a single suction belt and adjusting margeador with lacquer application unit.	Camex Resolution	51
8443.13.90	42	Printers "offset" fed by maximum size sheets of less than 37.5 x 51cm, for one or more colors, with maximum less than 11.000folhas capacity / h, with a varnish or more units for on-line operation.	Camex Resolution	51
8443.16.00	3	silicone for decoration of ceramic flat, with dimensions above 100 x 100 mm and can be combined and synchronized machines 1 to 6 for on-line operation.	Camex Resolution	51
8443.16.00	26	printing heads operating through system "gearless" (print shirts system without gears), "shaftless" (transmission system through servants motors without cardan shaft), 2 or more colors, a maximum width printing of 340mm, and / or maximum speed of 165m / min, with drying by UV cooled, with or without ducts and / or exhaust fans equipped with cylinders "chill drums" chilled water.	Camex Resolution	51
8443.16.00	34	central drum flexographic printers machines with up to 8 color groups, for printing on plastic films of polyethylene, polypropylene, laminates and paper (30-120g / m2); width not less than 1.600mm and less than 1,700mm; width greater impression than 1,500 mm but less than 1.650mm; length not less than 1.110mm and less than 1.250mm; Maximum speed 500m print / min; have: coil handling system with arbors boots on the printing machine control side; unwinder and rewinder, both with automatic exchange and cutting devices; and automatic impression setting system of "anilox" cylinder port and clichés of both registration as pressure. (Wording given by CAMEX RESOLUTION No. 44 OF 28 JUNE 2018)	Camex Resolution	51
8443.19.10	6	Printing units silk-screen suitable for operation in label printing machines and stickers, reel to reel, driven by servo motor and synchronized by "encoder" positioning, with printing width of between 10 and 35 inches, size repetition screens between 12 and 33 inches, 1/8 inch or 1/6 repetition step, subjecting the automatic screen printing position, with maximum print speed 490pés / min to work exclusively with electro screens formed (nonwoven ) with nickel hexagonal structure.	Camex Resolution	51
8443.19.90	17	printing rotary machines ionográfico or digital process, fed by sheet or coil, with or without controller unit.	Camex Resolution	51



8443.19.90	26	Machines printers for recording labels or flexible packaging, for term transfer with a resolution equal to or greater than 200dots / inch and a maximum speed equal to or greater than 500 mm / minute.	Camex Resolution	51
8443.19.90	131	25 to 50mm and a length of 90 to 210mm, equipped with printing system for inkjet seven heads without contact and UV lamps for drying system, power system and extraction tubes for mats shells to transfer star conveyors 4 to 15 in total each mandrel 60 and mandrel maximum speed of 150 pieces per minute.	Camex Resolution	51
8443.19.90	132	printing width up to 750mm, equipped with 10 print columns driven by independent motors with rapid exchange service, gas drying chamber with a length of 2.150 to 8.200mm , unwind and rewind reels for up to 1,000 mm in diameter and automatic lateral and longitudinal printing registration control.	Camex Resolution	51
8443.31.11	6	48,3cm), equipped with rechargeable ink tank of high capacity, working with four colors (cyan, magenta, yellow and black), capable of printing up to 6,000 page black and 6,500 color pages without changing consumable, scan, fax, and duplex (double-sided) automatic, maximum print resolution of 4,800 x 1.200dpi, printing on different types of paper with print mouth size 32,9cm and maximum length of print 119,4cm, print speed of up to 32ppm in black and 20ppm in color, direct printing function "tablets" and "smartphones" via "wireless" connection (wireless), operating low 20W power consumption.	Camex Resolution	50
8443.32.31	2	coils or sheets of photo paper, maximum width less than 210mm, with advance and cutting system, with or without automatic tab orders with print resolution 720 x 720dpi or greater, with printing capacity exceeding 300fotos / h in 15 x 10cm format, to be connected to a data processing machine.	Camex Resolution	50
8443.32.31	5	cyan, magenta, light magenta, yellow and black) for printing up to A3 size, ability to print borderless photos (edge to edge) with maximum resolution of 5760 x 1.440dpi, print speeds up to 15ppm and photo print 10 x 15 cm in 45 seconds, maximum printing area 32.9 x 111cm (12.95 " wide x 44 'long), capacity paper input to 100folhas / 10 envelopes and printing range of up to 1,500 color photos in the size 10 x 15 cm with low 15W power consumption.	Camex Resolution	50
8443.32.31	6	Inkjet printers, working with four colors (cyan, magenta, yellow and black) printing up to A3 +, with two print heads, maximum resolution of 5,760 x 1.440dpi, maximum print area of 32.9 x 111cm ( 12.95 "wide x 44" long), print speed of up to 30ppm in black and 17ppm in color in draft mode on plain paper, paper input capacity 100folhas / 10 envelopes and range of up to 3,550 pages in black and white and 5,700 color pages, without the need for ink replenishment based on ISO standard printing / IEC 24711 and 24712 considering sheets in size A4, operating with reduced power consumption of up to 19W when in operation.	Camex Resolution	50
8443.32.31	7	Inkjet printers, quality photo printing, working with 6 colors (cyan, light cyan, magenta, light magenta, yellow and black), ability to print borderless photos (edge to edge), maximum resolution up to 5,760 x 1,440 dpi, printing capacity in various types of paper, envelopes and directly on CDs and DVDs media, document print speeds up to 37ppm in black and 38ppm in color, printing speed of color photos 10 x 15cm up to 12 seconds, maximum print area of 21.6 x 111cm (8.5 "wide x 44" long) and input capacity paper 120folhas / 10 envelopes, with a range of up to 1,800 10 x 15cm, the direct print capability tablets and smartphones wirelessly wireless connection, operating with reduced power consumption 13W.	Camex Resolution	50

8443.32.99	2	printing machines for dye sublimation system through both ribbons coils color donor, specially designed for the production of photos, fed by paper rolls, with advancing and cutting system, operating with print resolution equal to 300 x 300dpi or higher, picture size 89 x 127 mm or higher, to be connected to the data processing machine (not included), with printing of time equal to or less than 13 seconds per photo in 10 x 15cm format.	Camex Resolution	50
8443.32.99	4	Automatic equipment for printing and labeling of sample tube bar codes for collection of biological material with up to 5 configurable modules and up to 6 drawers each supporting up to 30 trays, each drawer with a capacity of up to 100 sample tubes from 12 to 17mm height 75 to 100mm, with a processing capacity of up 300pacientes / hour, working with thermal printers to 6, with the touch sensitive screen (touch screen).	Camex Resolution	50
8443.32.99	7	plastic card printing machines (PVC, PETG, PET, ABS and polycarbonate, among others) retransfer system, with the possibility of variable data printing using tape ( "ribbon") UV, with the possibility of printing on cards with stripe and signature with invisible optional customization data applied to the photo, thermal transfer using waxy solid (sublimation dye) or pigment for resin film retransfer in the direction of the short edges. (Wording given by CAMEX RESOLUTION No. 90 OF 13 OF DECEMBER 2017)	Camex Resolution	50
8443.32.99	9	Thermal transfer equipment used for printing plastic cards (PVC or coated with PVC), using thermal transfer wax or resin solids (dye sublimation), and may receive update module for reading and / or recording of "chip" with or without contact, may operate scrambling data print through both ribbons color donor to the card with a maximum speed equal to or greater than 150 cards / hour (print a face). (Composition given by ordinance SECINT No. 2,023 oF 12 SEPTEMBER 2019)	Camex Resolution	50
8443.32.99	10	end equipment transfer used for printing plastic cards (PVC or coated with PVC), using thermal transfer wax or resin solids (dye sublimation), and may or may not receive update module for reading and / or recording of "chip" with or without contact and can operate with scrambling the data printed by the tape inked color donor to the card with 1 to 6 feeding containers cards with printing unit in high and low relief. (Composition given by ordinance SECINT No. 2,023 oF SEPTEMBER 12, 2019)	Camex Resolution	50
8443.39.10	14	inkjet printing machines with cumulative functions or not to schedule, code, dating products and packaging.	Camex Resolution	51
8443.39.10	27	microimpressores modules "array table" with at least 2 microejetores heads per color and resolution less than 600 dpi, all mounted on car driven electromagnetically by linear motor with optical electro, less than 25m <sup>2</sup> / hr print speed, with UV curing process, for 4 or more colors, with internal controller unit, flat table type "flatbed" maximum width of less than 1.6m, with device vacuum to fix the rigid media to be printed with the option to print on flexible media coil with opening for maximum media thickness exceeding 40mm.	Camex Resolution	51
8443.39.10	145	printheads with droplets of 7 picoliters; Maximum print speed of less than 160m <sup>2</sup> / hr, with 4 or more colors; print resolution for high quality to 1.200dpi; gradual control with U.V. lamps with control unit and internal management; maximum width printing of 3,09m; automatic adjustment system height of the media, these being of up to 5 cm, with an antistatic proprietary systems, automatic registration and protection of the print heads; printing table with vacuum control system gradually up to 3 vacuum zones, with or without system for flexible media roll to roll media capable of supporting up to 113kg.	Camex Resolution	51

8443.39.10	146	printing machines piezoelectric inkjet UV curing process using print system 4 (CMYK) or more colors, free paint volatiles (solvents), printer carriage drive by electromagnetic suspension (linear motor) and modules compounds of microinjectors integrated printers, optical system for UV curing, roll to roll operating with power and traction system of one or more coils of flexible material, maximum resolution exceeding 600 dpi, a maximum width not exceeding 320cm.	Camex Resolution	51
8443.39.10	148	Machines for temporary printing markings on ophthalmic lenses, through inkjet, drying (curing) by ultraviolet light (UV), for lenses with a diameter of 65 to 85mm and a height of 4 to 20 mm (0.5 base curve 12), with approximate production 240lentes / hour with programmable logic controller (PLC) and operator interface managed by the microcomputer.	Camex Resolution	51
8443.39.10	154	high speed industrial printers and high-volume printing in color or black and white for paper rolls that weigh between 60 to 215gsm (grams per square meter), print width of up to 520,7mm, with inkjet technology ( color Inkjet Web Press), resolution of 1,200 by 600 dots per inch (dpi) printing duplex at speeds up to 122m / min, with unwinding unit, rewinding unit, central ink supply station and remote workstation high performance for system control.	Camex Resolution	51
8443.39.10	156	high speed industrial printers and high-volume printing in color for paper rolls that weigh between 75 to 200gsm (grams per square meter) in standard configuration, optionally can go 40 to 350gsm, printing width of up to 739mm, with technology ink injection (Color Inkjet Web Press), resolution of 1,200 by 600 dots per inch (dpi) printing duplex at speeds up to 122m / min, with unwinding unit, rewinding unit, central ink supply station and remote workstation, high-performance control system (print server).	Camex Resolution	51
8443.39.10	177	maximum of 42 heads of piezoelectric printing, droplet size 6-42 picoliters and can print to "grayscale", with a maximum print speed of between 32 and 155m <sup>2</sup> / h (expression mode), with UV curing process in four or more colors, the internal controller unit, flat table "flatbed", having 6 or more vacuum zones for media fixing to be printed for printing rigid media can count supply roll to roll to flexible media up to 2.2m wide, rigid media maximum thickness of not less than 50mm and dimension of the printing table between 1.25 m to 2.50 x 2.51 x 3,06m .	Camex Resolution	51
8443.39.10	182	digital printing machines for inkjet curing UV and heads of piezoelectric printing droplets 7 picoliters; Maximum print speed of 206m <sup>2</sup> / hr, with 6 or more colors; print resolution for high quality to 1.200dpi; control unit and internal management; maximum width printing up to 2,69m for rigid media and flexible media up to 2,05m; Height adjustment system for automatic heads with thicknesses up to 5 cm stiff flexible media and media up to 3mm; exclusive anti-static systems; table with accurate, automated registration pins; protection system Heads and carriage, with three-dimensional motion control technology "Gantry" (computerized control of moving XY axes), with vacuum gradual control up to 6 zones, with or without systems for flexible media roll to roll media capable of supporting up to 100kg; with or without a camera to record for printing on substrates duplex.	Camex Resolution	51

8443.39.10	183	printheads with droplets of 7 picoliters; Maximum print speed of less than 275m <sup>2</sup> / h, with 6 or more colors; print resolution for high quality to 1.200dpi; control unit and internal management; maximum width printing of 2,54m or higher; Height adjustment system of automatic heads on media up to 5cm; exclusive anti-static systems; registration bar with automatic activation; protection system of the heads and the carriage; Vacuum conveyor with control with a gradual mounted on an aluminum honeycomb structure so as to transport the substrate, with or without feeder system semiautomatic plate (ABF) for rigid media; with or without media stacker with or without feeder system for flexible media roll to roll with support for media up to 100kg. (Wording given by CAMEX RESOLUTION No. 96 OF 07 DECEMBER 2018)	Camex Resolution	51
8443.39.10	185	large format printers with high resolution and quality photo printing with a width of mouth superior print to 420mm and equal to or less than 1.626mm, with inkjet technology for printing with print engine based on crystals "MicroPiezo® " with ability to achieve resolution of 1,440 x 720dpi "real" or more on high quality print modes, with a maximum size of 4.5 picoliters drop, with a maximum of two print heads, with roll-feed capability (coil ) or roll and single sheets, whether or not including tray.	Camex Resolution	51
8443.39.10	187	or more quality photo printing, drop size variable based MicroPiezo® crystals being the smallest droplet size of between 3 and 5.5 picoliter, equipped with 1 or 2 printheads with piezoelectric element and variable droplet size controlled print chip color LCD panel built in the printer body, mouth width greater than 420mm printing and 1.626mm or less, with power capacity per roll (coil) or loose sheets, low power consumption, reaching an output of up to 760W, noise levels of up to 59db, when in operation, and USB communication interface and high-speed network Ethernet 100BASE-TX / 1.000BASE -T.	Camex Resolution	51
8443.39.10	188	large format printers with high resolution and quality photo printing with support for maximum thickness of media between 0.06 and 5 mm, width of mouth superior print the 420mm and less than or equal to 1.950mm, with a jet printing technology with ink-based printing mechanism crystals "MicroPiezo® " with ability to achieve resolution of 720 x 1.440dpi "real" or more in high quality printing modes, variable droplet size, and the smallest drop size of 3 and 5.5 picoliter, having 1 to 4 print heads with roll-feed capability (coil) or loose, or not equipped with sheet tray. (Composition given by Decree No. 220 SECINT oF 25 FEBRUARY 2019 )	Camex Resolution	51
8443.39.10	238	based printing mechanism piezo membrane (TFP - Thin Film Piezo), working with 4-8 colors, for industrial use, equipped with 8, 16, 32, 48 or print head capable of ejecting ink drops of varying sizes 3 using acidic dyes, reactive, dispersed, pigmented and dye sublimation printing with a maximum width of up to 180cm (1.800mm), unlimited maximum length of printing with printing speed of between 168 and 740m <sup>2</sup> / h maximum print resolution of up 2.880dpi fed with different types of fabrics including silk, cotton blends, nylon and polyester, controlled by industrial computer (PC) built into the equipment.	Camex Resolution	51
8443.39.10	239	printing machines piezoelectric inkjet, with a maximum print speed of 33m <sup>2</sup> / h (600 x 300dpi) with UV curing process by means of LED lamps, 6 or more colors, applying transparent ink "clear ink" , internal controller unit, and can receive both flexible media or rigid media, the maximum thickness of the rigid medium equal to 10mm, maximum resolution of 1200 x 1.200dpi and maximum print width equal to 1.610mm.	Camex Resolution	51

8443.39.10	240	digital printing machines for inkjet curing U.V. - LED and piezo print heads with drops of 12 picoliters; Maximum print speed of 186m <sup>2</sup> /h with up to 6 colors (CMYKLCm); print "multi-layer" (pre-white, white and post-sandwich); Flexible media, ie, vinyl, canvas, cloth and other non-rigid media; control unit and internal management; maximum width flexible printing up to 3.2m; Height adjustment system of head and carriage in "dual-roll" printing, or not, into two smaller width rolls simultaneously.	Camex Resolution	51
8443.91.99	6	Machines for creasing and shred cardboard, suitable for operating coupled web presses, formed by cylinder modules hydraulically actuated.	Camex Resolution	51
8443.91.99	8	Creasing machines, boring and shred cardboard, suitable for operating coupled web presses, formed by cylinder modules hydraulically actuated.	Camex Resolution	51
8443.91.99	15	transport machines, counting, stacking, pressing, and offsetting printing roll, to be connected to the output rotary press fed by the coil.	Camex Resolution	51
8443.91.99	26	Tedders automatic paper batteries for the same sheet formats or higher at 540 x 740mm.	Camex Resolution	51
8443.91.99	46	insertar machinery and / or various superimposed inserts in books, magazines or newspapers with sealing individual products with a maximum speed exceeding 5.000produtos / h, programmable logic controller (PLC) with or without stacking unit output.	Camex Resolution	51
8443.91.99	52	Semiautomatic machine for forming rolls of bars printed by pressing and encintagem, horizontal positioning, to be connected to the output rotary printers fed by bobbins with staggered conveyor flow at the entrance.	Camex Resolution	51
8443.91.99	54	Equipment for curing UV LED inks on rotary flexographic printers, through technology UV LED, operating at a wavelength of 395nm, equipped with one or more LED strips, controllers, handlers and integrators to maximum width of 250 to 432mm and capacity processing up to 230m / min.	Camex Resolution	51
8443.91.99	62	printed rolls desintercaladoras machines with maximum transport speed of 85m / min, the maximum thickness of the flow 15mm, product width of 210 to 530mm and transport angle from 0 to 25 °, provided deinterleaving device in the printer output.	Camex Resolution	51
8443.99.29	2	Subsets support the print engine of ink cartridges for ink jet, made of injected plastic base mismatched tolerance / mismatch (mismatch) of 0.1 millimeter, and may contain carrier (s), pin (s) lock (s), strip (s) of cellular polymer and spring (s) of steel.	Camex Resolution	50
8443.99.41	1	print engines by thermal direct method with useful width of 48 mm, used in terminals for electronic payment by credit or debit card for payment vouchers printing on thermal paper in rolls with standard width of 58 mm.	Camex Resolution	50
8446.10.90	1	FLAT BED KNITTING MACHINES for the manufacture of rigid and elastic ribbons plan tissue with needles or not, simultaneous output to 2, 4, 6, 8, 10 or 12 ribbons (mouths) of the comb width (mouth) of between 20 and 210mm (including limits), 8 or 14 heald frames.	Camex Resolution	51
8446.21.00	3	at 4, 6, 8 or 10 shuttles set of cages for feeding the warp yarns 576 or more positions, maximum speed exceeding 360inserções / minute, to produce tubular fabric width equal to or greater than 250mm but less than or equal to 2.250mm.	Camex Resolution	51

8450.90.10	10	machines with front loading ( "Front Load") and a capacity greater than 10 kg, fed with voltages of 127 or 220VAC, with programs / dedicated routines and predefined, own for the digital control of the cleaning function, rinse, spin and temperature, given in a single body and provided with a plastic housing with lid, control board protected by resin flexible and insulating polyurethane based electronic circuit dedicated microcontroller and EEPROM to control and monitoring of all functions of the washing machine, including the engine control technology with "Direct Drive" that receives commands via "driver" dedicated; and may contain noise filter in the feed line. (Wording given by CAMEX RESOLUTION No. 31 OF 02 MAY 2018)	Camex Resolution	51
8450.90.10	11	Integrated control panels and control functions for users, for use in a washing automatic clothes with front loading machines ( "Front Load ") and a capacity exceeding 10 kg, mounted on plastic substrates sealed with resin flexible and insulating polyurethane, comprising: drive buttons, rotary selector switch, audible indicator, LED indicators, "display" LCD or LED technology and electronic circuit microcontroller-based 8-bit or 16-bit or 32-bit and RAM built up 2kB and can include plastic substrates and / or rubber, labels, connecting cables and touchpad. (Composition given by CAMEX RESOLUTION No. 23, 27 MARCH 2018)	Camex Resolution	51
8450.90.10	12	Opening and closing device for the exclusive use in washing machines capacity exceeding 10 kg of clothes, equipped with chrome plated plastic handle, chromed plastic trim with lower external diameter of 550,0mm and lower height 55,0mm and protective display with outer diameter less than 600 mm and thickness less than 5.0mm.	Camex Resolution	51
8450.90.10	13	Counterweights for balancing of washing machine tube made of injected plastic outer body (polypropylene), inside filled with iron waste and strength concrete of 100 to 350kgf, inner radius between 180 and 250 mm, thickness between 50 and 100mm, for exclusive use in washing machines capacity expressed in clothes dry clothes weighing more than 10kg.	Camex Resolution	51
8450.90.10	14	enclosures with capacity expressed in dry laundry weighing more than 10 kg, made of agglomerated wood with application of melamine resin (or melamine formaldehyde) on both sides, with a length of 520 and 640mm, width between 490 and 602mm, thickness from 10 to 14mm and a density of $680\text{kg} / \text{m}^3 \pm 5\%$ .	Camex Resolution	51
8451.80.00	68	textile steaming machines and / or polymerization flat woven or patterned hosiery, provided with steam camera with motorized butterfly valve system which automatically controls the temperature and humidity, electronically controlled (PLC) with axes conveyors with automatically variable pitch, passing 100mm to 200mm and vice versa, with a working width up to 4m tissue with camera capability for up to 550m fabrics, conveying speed of the variable tissue of 0 to 70m / min.	Camex Resolution	51
8453.10.90	2	Continuous automatic machines for drilling wide leather exceeding 550mm, with transverse perforation tools servo system to change the spacing of the perforations and regulating drilling speed.	Camex Resolution	51
8453.10.90	36	Sanders leathers and / or skins with variable speed transport roller with clear width exceeding 1.800mm, sleeveless filter system for chilling and powder compaction.	Camex Resolution	51
8453.10.90	38	1.800mm, with a suction head for solid waste, antistatic mat for transporting the hides without baghouse system for chilling and compaction of the powder.	Camex Resolution	51
8453.10.90	45	Hydraulic machines rebaixadeiras of hides or skins, with useful working width less than 3,000 mm.	Camex Resolution	51

8453.10.90	46	hydraulic rotary machines for polishing and smoothing hides or skins, with cylinder stone or felt, with working width less than 1,800 mm.	Camex Resolution	51
8453.10.90	80	Hydraulic machines combined to dry and stretch leather with useful working width of 3.300mm, complete with motors, gearboxes, electrical panel.	Camex Resolution	51
8453.10.90	83	3,000 mm, complete with motors, gearboxes and control cabinet and accessories.	Camex Resolution	51
8453.10.90	84	Machine for softening leather wet or dry, with a useful working width of at most 3.400mm, with 2 or more softening heads and 2 mass synchronized frames, controlled by a programmable logic controller (PLC).	Camex Resolution	51
8453.10.90	95	Combinations of machines for continuous polishing laminated with synthetic polishing heads 3; polishing working width up to 165 mm, in rolls or sheets, composed of: 1 unwinder 2 cylinders; 1 fabrics accumulator; 2 platforms; 1 polishing system of heads with polishing rolls 3 (diameter of 280mm) coated woven cotton or wool, with pneumatic control; 1 rewinder 2 cylinders; Third 11KW engines; 1 2,5kW engine.	Camex Resolution	51
8454.30.10	36	composed of: 1 injector for pressure casting, horizontal cold chamber type with closing force exceeding 16.000kN, closing stroke exceeding 900mm and plate of dimensions equal or greater than 2.000 x 1.800mm, with three injection stages, controlled by proportional valves and microprocessor control, with control panel with programmable logic controller (PLC) for monitoring and control of operational parameters of the process; 1 dispenser oven aluminum with a minimum capacity of 1,000 kg; Two robots with six degrees of freedom and one for the release agent application and the other for extracting and handling of the molded parts; 1 grinder press; system for rapid exchange of mold; 1 system with conveyor to the output of finished parts.	Camex Resolution	51
8454.30.10	44	Machine for pressure casting of non-ferrous metals horizontal, cold chamber type with closing force exceeding 26.485kN proportional valves and microprocessor control, with 1 thermoregulatory set, system 1 "jetcooler" and one vacuum system	Camex Resolution	51
8455.21.90	24	Laminators flat steel bar ends, the hot rolled to bars with a length between 50 and 300mm, with a thickness between 5 and 50mm, width between 40 and 120mm and blade length between 300 and 2.500mm, with capacity laminating 2.000kN with "squeezer" of 600kN to deformation of the blade, with lamination angle of 15 °, 17rpm rolling speed and rolling temperature of between 950 and 1000 ° C, power 30kW, with an average capacity of 1.250peças / hour, consisting of charging and discharging bars system, electrical panel with programmable logic controller (PLC).	Camex Resolution	51
8456.11.19	10	3mm and 25mm (including limits) with automatic loading and unloading of the minimum working area of 1,500 x 3,000 mm plates, and tubes with a length between 6500 and 12.500mm ( including the limits), automatic passage of pipe cutting for sheet metal and plates for tubes with numerical control (CNC).	Camex Resolution	51
8456.11.90	13	speeds exceeding 150 m / min .; rotation equal to or greater than 166rpm; with punching strength equal to or exceeding 20 tonnes; for sheet metal up to 8mm thick; fully integrated and automated; consisting of: 1-operated machine tool simultaneously with laser resonator optical fiber of not less than 2.000W and punching tools with system turret type rotating stations 16 or more; own storage system for sheet metal and cut and stamped parts; computerized numerical control (CNC); chip output system; equipped with sound enclosure	Camex Resolution	51
8456.30.19	6	Machine tools for cutting, electro-discharge the wire, metal parts immersed in liquid medium, with automatic insertion of the wire, with numerical control (CNC).	Camex Resolution	51

8456.40.00	1	Machines for marking ophthalmic lenses by removing the anti-reflective layer by plasma jet with a 30.000VAC generator.	Camex Resolution	51
8456.50.00	2	cutting machines, jet d'pure water, with a nominal power of up to 400V / 60Hz, controlled by CNC, cutting soft materials, composed of two movable tables, two shafts and two cutting heads, two electric motors, precision settings: + -0,2mm, minimum cutting speed of 1 m / min and a maximum of 60m / min, maximum acceleration of 10m / sec <sup>2</sup> , minimum cut length of 1.70 m and a maximum of 6,00m and a width of cut 1.30 m and 4.00 m maximum, maximum cutting height of 200 mm, equipped with a high pressure pump (2.3 liters) and maximum pressure 3.800bar. (NCM and No. Ex altered by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51
8457.10.00	304	Machining Centers for final finish rods for automotive engines, "spindles" hydrostatic high precision, speed of 30m / min and course of machining 300mm in the "Y" axis speed of 20m / min and course of machining 260mm in "Z" axis and acceleration of 5 m / s <sup>2</sup> on both axes.	Camex Resolution	51
8457.10.00	305	Machining centers for roughing and semi-finishing of connecting rods for automobile engines, 2 "spindles" multitorre for various operations (tee-pee, bevel, holes and threads), with course of machining in the "Y" axis of 300mm and the axis "Z" 260mm, the maximum spindle speed of 60 rpm, the workpiece fixture time, opening and closing of 0.3 seconds, and acceleration of the shaft 5 m / s <sup>2</sup> .	Camex Resolution	51
8457.10.00	306	table 40t, with simultaneous 5-axis with (X, Y, Z, B and C) 3 to linear displacement axes X, Y and Z with courses 3,000 x 2,100 x 1,200 mm respectively, with axis B of +/- 100 ° angle and amplitude rotatable 360 ° C, rapid shift in axes x, Y, Z 40.000mm / min and working forward 40.000mm / min with a melting 12.000rpm, power 40kW, 248Nm torque and prepared for placing a screw 30.000rpm over and power 11 kW, equipped with additional accessories measurement control tool, and a probe controlled by an infrared measurement of extreme precision machined parts of both roughing and finishing the manufacture of molds, dies and aerospace components with machining capability of the sides of the part 5 with a single fixing.	Camex Resolution	51
8457.10.00	307	double column vertical machining centers, 3-axis, work table 2,100 x 1,400 mm, maximum weight on the table 8.000kg, courses X, Y and Z respective 2020 x 1500 x 800 mm.	Camex Resolution	51
8457.10.00	308	milling, drilling, threading, able to machine the five sides of the workpiece in a single set, perform machining with interpolation using the simultaneous 5-axis, with three axes linear displacement with X, Y and Z with courses of 1.800, 2.100 and 1.250mm, respectively, with a velocity of 60, 30 and 40m / min, respectively, with rotating axis B range from -30 to + 180 °, with Ø 1.700mm rotary table controlled by numerical control (CNC) named C axis, with a maximum load capacity of 8.000kg and precision 8arc-s, equipped with milling head with cone HSK A100 type, with rotating 15.000rpm, power 52kW, torque of 404Nm with automatic tool change system with magazine from 60 tools, linear axes with an accuracy of 0.012 X, Y and Z, respectively, according to VDI / DGQ 3441, acceleration X = 5m / s <sup>2</sup> , Y = 4m / s <sup>2</sup> and Z = 6 m / s <sup>2</sup> .	Camex Resolution	51



8457.10.00	309	vertical machining centers of double column, type "Gantry" (porch) with numerical control (CNC), capable of chopping, milling, drilling, boring and threading metals and non-metals with automatic tool changer with fixed table 3,500 x 2,500 x 300mm, 28mm with T grooves equidistant from their centers 250mm, a capacity table on 15.000kg / m <sup>2</sup> with chip carriers with 5 axes, with the second headstock to 14.000rpm with continuous movement, - slewing + -270 ° C and -185 ° + The cone HSK-A100 type, with nominal stroke shafts other longitudinal working 2.500mm, transverse and vertical 3500mm 1.300mm, maximum feedrate 50m / min and internal cooling system and external 40bar 10bar, both of 30L / min.	Camex Resolution	51
8457.10.00	310	milling, drilling, threading, able to machine the five sides of the workpiece in a single set, perform machining with interpolation using the simultaneous 5-axis, with three axes with linear displacement X, Y, Z to travel from 6,000, 4,200, 1.250mm respectively with displacement speed 30m / min to axes X, Y and Z ivamente respect with axis of rotation B of the range of - 180 + 180 ° C with rotating axis continuous range 360 ° with sliding table 6,000 x 3,000mm controlled by numerical control (CNC) with a capacity of 40.000kg maximum load, provided with milling head for roughing with cone type HSK A100, with rotation 6.000rpm, power 45kW, torque 1.200Nm; finish milling head with cone HSK type A63, with rotation 24.000rpm, power 23KW and roughing milling head in straight type with cone HSK type A100 with rotation 6.000rpm, from 45kW power, torque 1200 nm with single Auto tool exchange system with magazine 60 from automatic exchange of tools and heads, linear axes with 0,015mm precision in X, Y and Z 0,008mm, respectively, according to VDI / DGQ 3441.	Camex Resolution	51
8457.10.00	311	Vertical Machining Centers for machining head with dual landing gear of aircraft, able to machine two landing gears simultaneously with heads 5-axis being the X-axis of 2 x 5.000mm, 3.600mm Y axis, Z axis 1.500mm C +/- 200 ° axis and B-axis of -10 / + 110 °; power 40kW, maximum speed and maximum torque of 18.000rpm 1.800Nm machining; automated trading system tools through robotic arm with 150Kg load capacity and range of 2.696mm; with computerized numerical control double (CNC).	Camex Resolution	51
8457.10.00	312	400 mm and a capacity of 250kg with current X, Y, and Z 500, 400 and 300mm respectively, the speed "spindle" exceeding 24.000rpm, the CNC controller integrated system for automatic adjustment of parameters X axis motor, Y and Z, the control effort "spindle" in machining soft shutdown, work feed 20.000mm / min and fast forward on the X, Y and Z 48.000mm / min.	Camex Resolution	51
8457.30.90	4	between 0.4 and 10mm, provided with table with stations 24 and positioning accuracy of 0,005mm with programmable logic controller (PLC), for operations drilling, broaching, milling, and lowering internal and external thread, with automatic feeding system of gross pieces and extraction of the finished parts.	Camex Resolution	51
8457.30.90	5	diameters between 0.4 and 10mm composed of 12 or more indexing stations used for drilling operations, broaching, milling, and lowering internal and external threading, with automatic feeding system of gross and extraction of the finished piece parts, with control by programmable logic controller (PLC).	Camex Resolution	51
8458.11.99	4	Lathes horizontal, computerized numerical control (CNC), monofusos with mobile main head, like "Swiss Type", for simultaneous feeding of parts with premium car multiple tool holders for driven or not tools, type "gang", and rear zone.	Camex Resolution	51

8458.11.99	70	turning, drilling, milling and thread (including off-center), with a capacity of maximum diameter torneável less than 500mm, maximum length torneável less than 500mm, courses of axes X, Y and Z equal to or greater than 450, 200 and 550mm respectively tilt shaft B with 220 ° (-30 ° + 190 °) with tilt axis 360o C and positioning precision 0 , 0001 °, maximum speed of the main spindle at or below 5,000 rpm, with automatic exchange of system tools, magazine capacity of 20 or more tools, equipped with rotary tools, the main engine power less than 11 kW and power drive motor of less than 7.5kW tools.	Camex Resolution	51
8458.11.99	74	horizontal automatic lathes, computerized numerical control (CNC), monofusos with main mobile head, Swiss-type "Swiss Type" or without guide bush ( "Non-Guide Bush Type").	Camex Resolution	51
8458.11.99	119	Horizontal lathes with numerical control, for mounting on pit rails in for machining and reprofiling of wheels of railway wheel sets with gauge between 1000 and 1.676mm and ability to machine wheels with diameters between 350 and 1,400 mm.	Camex Resolution	51
8458.11.99	157	and allows simultaneous machining), vertical bus for turning, drilling and tapping, with a maximum rotation 3.500rpm with 15kW motor, articulated arm robot 4 axes and turner integrated auxiliaries machine, maximum diameter torneável equal to 250mm, courses X and Z 225 and 405mm, respectively, with two tool holder turrets for up to 8 tools each with numerical control (CNC).	Camex Resolution	51
8458.11.99	158	maximum diameter machined 290mm, maximum length machined 370mm, with travel axis X 135mm Z axis 370mm and axle 25mm Y, advances fast in X and Z 20m / min rapid traverse Y 6m / min with synchronized control of the C-axis with the Z axis and Y axis, "software" of non-circular programming high-speed communication, Y-axis for oval machining acceleration 8G ceramic guide, rotation of the spindle 4.000rpm, the indexing axis C of 0.001 degree, the main engine power of 11 kW.	Camex Resolution	51
8458.19.90	1	horizontal, automatic lathes, PLC and HMI, proper and exclusive to machining head and mouth ammunition case "cartridge type .50" (12.7 x 99mm), Multiple Head with mechanical drive the cams and servo motor, capable of series manufacturing of metal parts machining to 80peças / min, equipped with 2 feeders turntable and fed directly into the surrounding tree, 2 spindles / workstations, equipped with: distribution kits, indexed plate transfer and output case over.	Camex Resolution	51
8458.91.00	71	polymer concrete base for turning and milling operations the hard elliptical tracks or Gothic with hardness of 56 to 65HRC, with two linear axes X and Z with reference 850 courses and 320 mm, respectively, without the use of coolant or cutting fluid, fast forward speed of X and Z axes of 45 and 30m / min respectively for simultaneous operation in two parts of constant velocity joints.	Camex Resolution	51
8458.91.00	72	9 multitasking lathe axis with numerical control (CNC), the maximum speed "Spindler" of 6.000rpm, power 7.5kW, Tools 18, travel on the axes X1, Y1, Z1, Y2, Z2 200, 455, 192, 486, 450 and 228mm respectively and rapid traverse speed of 20m / min.	Camex Resolution	51
8460.12.00	4	double disc grinding, flat and parallel surfaces for grinding rods for automobile engines, capable of grinding surfaces with strut 50 microns flatness, parallelism to 50 microns and 1,6Ra roughness.	Camex Resolution	51

8460.12.00	5	Machines for grinding flat profiles, circular, concave and convex with device 4th axis of 100mm grinding capacity in diameter by means of CNC control, automatic dressing system profiles in DXF format, support for German diamond disk with a radius of 0, 25; movement of three axes X, Y and Z driven by servomotor and ball screw interpolating simultaneously with the X axis Z, minimum increment of 0.001 mm without hydraulic drive; rotary axis driven by servo motor with an output of 10HP with 5HP frequency inverter for speed control; maximum length rectifiable the X axis 610mm, Y 305mm in distance from the table to the grindstone 600 mm, magnetic card 600 x 300mm, full fairing cooling system with 95L capacity filtration with magnetic separator and exhaust system and collector powder.	Camex Resolution	51
8460.31.00	88	tool sharpening machines with five axes controlled by numerical control (CNC), for the production and grinding of cutting tools, machining, grinding and finishing of parts, with travel in the X axis 480mm, Y 250mm and Z 275mm, maximum speed of advance along the X axis 48m / min and the Y and Z axes of 24m / min, grinding head shaft 225 with working area.	Camex Resolution	51
8460.31.00	159	Machine tool for producing and / or regrinding tools and inserts of polycrystalline diamond (PCD), cubic boron nitride, polycrystalline (PCBN) or hard metal (HM) by means of abrasive wheels, accurately linear resolution 0,1µm with 5 axes; with numerical control (CNC); with C-axis table rotation movement of the pivot shaft; turning angle of 200° degrees table; with optics for dimensional control through camera with 3 CNC axes, allowing run-rays up to 2,000 mm. with or without loading and unloading system automatic tool and / or parts.	Camex Resolution	51
8460.40.11	3	diameter with time 1,2min cycle containing two types of PLC; rotation system and beat combined with reversal; measurement system and post-process pneumatic buffer, and third calibration measurement linearization ring.	Camex Resolution	51
8460.40.11	4	automatic machines, numerically controlled, for honing 51mm diameter bearings with honing station with electromechanical support tool, 38/2 cycle time, oscillating unit honing stones with a set with diamond stone, measuring station with a tolerance of 2µ, hydraulic cooling and lubrication; mist collector duct; automatic loading and unloading and interface with "software" specified for recording ratings of machined parts.	Camex Resolution	51
8460.90.90	87	vibratory finishing and drying of metal parts, mounted on metal frame for panel controlled by PLC and HMI, composed of: vibrating trough with volume of 400 liter equipped with ultrasonic sensors, circular bowl vibratory washing, 680 L, equipped with motovibrator 5kW circular vibrating bowl for washing and drying, 680 liter provided with motovibrator 5kW discharge parts and drying unit (electric heater and suction 19,1kW) unit dosage, circulation and aqueous drainage, provided with 11 discharge pump 20L / h, piping, valves and instrumentation (measurement and registration of temperature, pH, and conductivity), 4 tanks for aqueous solution recirculation with a nominal capacity of 1000 liters each, equipped with heating, 4 mixers / agitators by a reduction motor 0,37kW, one oil separator, valves, pneumatic diaphragm pumps 8, with a flow rate of 2.2 m <sup>3</sup> / h and maximum pressure 7bar, 4 pneumatic diaphragm pumps with flow 6,6m <sup>3</sup> / h and maximum pressure 7bar and electrical system and control, with two electrical cabinets.	Camex Resolution	51

8460.90.90	88	parts deburring automatic machines in ferrous materials such as gray and nodular cast iron, controlled by PLC (programmable logic controller) provided a 6-axis robot capable of 235kgf to "eletrospindle" up to 24kW, rotary table 2 positions 0 and 180 °, automatic tool change, and store up to six positions retractable counterpart system for the locking parts changer pallet 2 position and laser measurement system for compensating dimensional variations of the castings, may deburring pieces with maximum dimensions and weight, respectively, of up to 250kg and up to 1,190 per 800mm, inclusive of the workpiece supporting device.	Camex Resolution	51
8460.90.90	89	Machine combinations for the surface treatment of deburring, cleaning by vibratory finishing and drying of metal parts, mounted on metal frame, controlled by panel with PLC and HMI, composed of: 3 vibrational circular tanks for washing and drying, of 50 liters, equipped with rail vibration with a volume of 100 liters with ultrasonic sensor, motovibrator of 0.75kW, exhaust parts and drying unit (12 kW electric heater and suction), the dosage unit, recirculation and drainage of aqueous, 14 with electric pumps, with flow to 20Litros / h, piping, valves and instrumentation (measurement and registration of temperature, pH, and conductivity), 4 tanks for aqueous solution recirculation with a nominal capacity of 1,000 liters equipped with heating resistors seat 4 mixers / agitators by the gearmotor 0,37kW, one oil separator, valves, 10 or more pumps, pneumatic diaphragm type, with a flow rate between 2.2 and 6,6m <sup>3</sup> / h and a maximum pressure of 7bar s system power and control, with 4 electrical cabinets.	Camex Resolution	51
8462.10.90	117	thickness of 0.1 mm, a width of 12mm, for use in tires, composed of: 1 power unit of the metal tape main body 1 with pneumatic cylinders recording code with auto-digit exchange system and maximum diameter of 2.6 mm hole in the metal tape, first rewind drive with electric motor and one control panel and control.	Camex Resolution	51
8462.21.00	199	Machine combinations for the automatic production of springs and bent pieces of wire, composed of: 1 machine for forming, rolling, and folding wires, equipped with 8 or more controlled axes can be configured with up to 24 axes CNC, provided with power unit Swivel with 2 pairs of feed rollers; Rotary cutting guide for individually programmable; Automatic winding and unwinding and folding unit, for processing wires with diameters between 0.4 and 1.6 mm, wire feed speed of up to 120m / min and 1 with CNC control cabinet, touch-type "touchscreen" display HD coupled; with universal sets of tooling to roll and bend to work with several different diameters of wires.	Camex Resolution	51
8462.21.00	223	Programmable control equipment for the manufacture of cores such as "wound core", with simultaneous processing capacity of two silicon steel plates of 30 to 180mm and thickness from 0.2 to 0.35 mm, provided with unwinding, cutting head and the formatter silicon steel plates.	Camex Resolution	51
8462.39.90	10	Automatic machine for pre-forming (folding) and cut electrical capacitor terminals.	Camex Resolution	51
8462.49.00	46	Combinations machines for expansion from sheet metal coils or sheets cut with a maximum width of 1.550mm and a maximum thickness of 9.5 mm (referred to carbon steel), composed of: 1 unwinder hydraulic sheets with maximum load capacity of 15 tonnes, 1 pre-straightening; 1 Lift the cut sheets; 1 expander and press sheets with a capacity of 230golpes / minute.	Camex Resolution	51
8462.91.19	47	Hydraulic presses for terminal crimping hoses, with a sliding bearing in the pressing tool free from lubrication, pressing force between 280 and 340 tonnes, the maximum diameter of the pressing 165mm, stroke 70mm, opening speed of 33mm / s tools , lock 23mm / s and 1.4 mm / s pressing with programmable logic controller (PLC) type "Touchscreen".	Camex Resolution	51

8462.91.99	3	manufacturing metal lids with sealant types "pry-off" and "twist-off", with a production capacity of up to 5.184 tampas / min, consisting of: mechanical press 1 dual-action, with capacity of 192 golpes / minute with automatic feeder, sheet steel, steel, complete mold, for closures of 0.22 mm in diameter, set of interchangeable tools covers 0.18 mm in diameter, for devices calibration height and angle, carrier air and leaves palletizer; 1 rotating sieve to discard defective caps; 1 magnetic hoist; 1 storage silo; 2 machines for coating application "PVC" inside of metal lids, each capable of processing up to 180.000 tampas / hour (3.000 tampas / minute), complete with one to two tooling type caps "pry-off" and for another type "twist-off" and two sets of knives processing "PVC free" lids "PVC"; 1 resin feeder "PVC"; 2 cash vibrators; 2 cooling mats; Second cooling stations; 1 cabin with electric control panel with keyboard and mounting accessories; 1 tire friction panel; and conveyor belts. type "pry-off" type, and another for the caps "twist-off" and two sets of knives processing "PVC free" in "PVC"; 1	Camex Resolution	51
8463.90.10	108	Rotary Tables 6 workstation for cracking rods for automobile engines to clean cracked surface of the rod cover positioning and inserting screws, tightening screws with clamping tolerance of +/- 1 degree, and one piece of capacity every 4 seconds .	Camex Resolution	51
8464.10.00	33	natural stone plates of a variable nominal thickness of 2 or 3 cm by means of diamond wire with a diameter equal or less than 6.3 mm; parallel diamond wires to one another through 2 drums guides motorized positioning altering the distance of the guide wire to fit the block with motorized system for automatic programming of changing the angle between guide wire first driving pulley, one driver and one drum Folded tensioner pulley movement with bearings installed; pulley wheels and anodized aluminum measuring not less than 1.000mm; width of the lumber cut not less than 1,900mm; equipped with individual wire tension control system; electronic centralized system with alarm for break control wires and rubber with automatic stop; programming and control system of the cutting cycle; online system of care the distance, with access via the Internet for technical assistance; security system with protective grid with engine stop; automatic centralized lubrication system with the lubrication distribution without machine stop; with up to 3 cars clipboards with capacity of 40t each.	Camex Resolution	51
8464.10.00	38	Machines for cutting natural stone, of the type used in esquadramento blocks operating system for diamond wire, pulleys and driven pulleys, with automatic tensioning system and automatic stop at the end of cutting or breaking the wire; linear speed of the yarn between 25 and 40m / s; provided with rail for moving the machine on a metallic structure; Drive machine on mats; fitted with hydraulic and mechanical stabilizers; the machine control and cutting control parameter and machine drive control and command hydraulic stabilizers; possibility to carry cut in a tilted position.	Camex Resolution	51
8464.20.10	12	Machines Automatic polishing machines, controlled by numerical control (CNC), for polishing ophthalmic lenses "free-form" in diameter up to 92mm and various organic materials such as CR39, polycarbonate or "Trivex", among others, with system diameter 43mm mounting block, concave curves for 0-14 diopters or 0-18 diopters.	Camex Resolution	51
8464.20.90	15	sizing machines for ceramic tiles, composed of 8 or 10 gauges fixed horizontal roller heads and / or oscillating plus 4 heads with vertical wheels with working width of the entrance to the tile pieces to 1,200 mm, with automatic start up and down the horizontal heads.	Camex Resolution	51
8464.90.19	96	itself to bevel interface for one or more chamfering numerical control, with a storage capacity of 200 jobs and with dimensions 460 x 217 x 475mm and current 1A.	Camex Resolution	51

8464.90.19	98	Automatic machine tools for beveling, trimming and end glass ophthalmic lenses, also capable of working plastic lenses, with visualization of 3D facet or groove cut lenses with B quota minimum of 17mm in flat 18,5mm facet facet standard, numerically controlled.	Camex Resolution	51
8464.90.19	99	Automatic machine tools for beveling, trimming and end glass ophthalmic lenses, also capable of working plastic lenses with lens material removal rate with a minimum diameter of 18mm polished flat finish and 19,5mm with facet, endowed with memory for 200 formats, numerical control with centralized locking system coupled lenses.	Camex Resolution	51
8464.90.19	100	Automatic machine tools for bevel plastic ophthalmic lenses with numerical control (CNC), with automatic calibration, statistical control of the cuts carried out and reading the thickness of the lens, with maximum engine speed of 20,000rpm cutter.	Camex Resolution	51
8464.90.19	145	curve generating equipment, computer-controlled ophthalmic lens diameters up to 85mm or even 92mm, diameter of carrier block 43mm, scales lens concave 0-14 (or 30) diopter convex 0-30 diopters , high performance 32bit controller with dual processor technique, equipped with one or two engines combined, interface "software", barcode reader, with or without fluid and cutting fluid tank, with or without a cooling system, or more with a tool holder and one or more diamond tools.	Camex Resolution	51
8465.10.00	32	(CNC) with four independent heads 128 vertical spindle, magazine system for exchange of drills, four independent horizontal heads 72 chucks, with a maximum of 4 electro-, drilling two panels capacity simultaneously with a length of 240 to 3.100mm, with or without loading and unloading system automatically. (Wording given by CAMEX RESOLUTION No. 15 OF 28 FEBRUARY 2018)	Camex Resolution	51
8465.20.00	3	sawing and drilling, with straight or curved cutting optimization system ("nesting"), with or without parts identification system with barcode, exchange of tools for working wood panels or agglomerated fiber (MDF) with a maximum width ranging between 1.300 to 2.205mm and a maximum length comprised between 2.500 and 5.600mm, with or without loader and unloader. (Composition given by Decree No. 531 of SECINT 20 AUGUST 2019)	Camex Resolution	51
8465.91.10	5	interpolated axes through numerical control (CNC) without using feedback, with programming via CAD / CAM saw inclination angle of +/- 90 ° with hydraulic tensioning system and or pneumatic saw, with or without automatic loader.	Camex Resolution	51
8465.92.11	1	Machine multiple stations for milling and sanding wooden narrow parts on both sides simultaneously with six operating groups, 2 bits and 4 sandpaper, or 8 operating groups, with 4 bits and 4 sanding with movable table course 2.500mm or more with continuous feed, with or without computerized numerical control (CNC).	Camex Resolution	51
8465.99.00	28	exceeding 20t / hour chip, composed of: immersion tank provided with agitator and chamber for extracting coarse particles, centrifugal pump, the hydrocyclone for the extraction of stones and thread triple for water drainage.	Camex Resolution	51
8465.99.00	33	drilling, milling and sawing, by 1 or 2 heads, 1, 2, 3 or 4 each motor with 1 or 2 outputs rotation maximum 24.000rpm, at least 5 axes interpolated and can reach 14 to simultaneously drive shafts (interpolated) with programming via dedicated to CAD 3D scanner programming with or without allowing working irregular surface parts, parts with the length axis X with at least 1,700mm and maximum 6.500mm, with or without automatic parts loader. (Wording given by CAMEX RESOLUTION No. 73 oF 05 oF Outubro 2018)	Camex Resolution	51

8465.99.00	46	Machine tools for woodworking, with numerical control (CNC) for drilling, milling and sawing or cutting through two or more heads, 1 or lower and one or more upper and / or having multiple vertical tools and independent horizontal, able to work simultaneously two pieces of a width of 70 to 1000 mm and of a length exceeding 90 to 3.000mm, with or without loading table. (Composition given by Resolution No. 40 of May 04 OF 2020)	Camex Resolution	51
8465.99.00	47	capable of drilling, milling and sawing by means of one head having 1, 2, 3 or 4 engines with maximum rotation 24.000rpm with the least 5 interpolated axes and can reach 12 axes with simultaneous drive (interpolated) with programming by CAD dedicated to 3D programming, with or without a scanner, enabling work pieces on the irregular surface to pieces with a length in the X-axis at least in 1,700 mm and a maximum of 7.000mm, with or without automatic loader parts.	Camex Resolution	51
8465.99.00	93	Cepilhadores antagonistic rotating ring with vibratory feeder, a rotary magnet, and heavy particle separator capacity equal to or greater than 16 dry tons per hour cepilhos timber.	Camex Resolution	51
8465.99.00	129	Automatic machines for drilling, milling or sawing solid wood, MDF or particle agglomerate with unlimited axis X, Y, Z 1.100mm in width and 60mm in height, controlled by numerical control (CNC) drilling system with peer through 10 vertical spindles and 3 double horizontal, with the panel drive system through gripper and roller support.	Camex Resolution	51
8466.10.00	6	toolholders tower for use of activated or fixed tool holder in the radial or axial positions, with hydraulic indexing, pneumatic or electric, and automatic drive through the numerical control of CNC lathes. (Wording given by ORDINANCE SECINT # 531 OF 20 AUGUST 2019)	Camex Resolution	51
8466.93.20	4	linear ball or roller guides, used in machining centers, to promote themselves Linear displacement.	Camex Resolution	51
8466.93.30	9	clamping cylinders, passing, hydraulic, suitable for plates and clamps of fixing vises.	Camex Resolution	51
8466.93.30	18	clamping plates 3 nuts with passage bar, actuated by radial movement of blocks for maximum speeds of 6.500rpm with less exchange of repeatability 0.02 mm, maximum clamping force 250kN, and a safety lock of the nuts.	Camex Resolution	51
8468.20.00	1	Semi-automatic cutting machines for ferrous material (forged) by the heating process and oxidation "oxyfuel", provided with: two cutting torches with automatic electric ignition system, cooling system torches with water, and adding powder system iron, cutting capacity of up to 2.000mm thickness, the type mounted in a frame (cantiveler) maximum course of 12.500mm axes X, Y and Z 4.000mm 1,700mm, gas and oxygen control station equipped with pressure reducers , solenoids and valves valves, automatic cleaning system low pressure defagulhador and suction ducts operated by the mobile cabin with (PLC) programmable logic control with safety glass, air-conditioning and man-machine interface system (HMI).	Camex Resolution	51
8471.50.10	1	Data processing units for the exclusive handling of radiographic and mammographic medical images having features of "hardware" including island and "software" for the purpose of identifying patients and may or may not include LCD color monitor, "touchscreen" or not.	Camex Resolution	50
8471.70.12	1	Hard drives, with one head set-disc (HDA "Head Disk Assembly"), with SATA interface, MTBF less than one million hours, duty cycle 24 x 7 (twenty-four hours, operating seven days per week) designed for audio data storage and / or video, developed for room temperature operation within the range between 0 and 60 ° C or exceeding it, resistance low in shock 65G, with a duration of 2ms in operation, during the reading process.	Camex Resolution	50

8471.70.12	3	Hard drives, with one head set-disc (HDA "Head Disk Assembly") and SCSI - Small Computer System Interface or SAS (Serial Attached SCSI) or Fiber Channel (FC).	Camex Resolution	50
8471.80.00	3	Board Computer Unit"), endowed with a TIR_FSR drawer (specific functional drawer) 4 microprocessor cards and a TUGE drawer (embedded management drawer) with 11 microprocessor cards, working temperature of 0 to 55 ° C controlled by two fan units one for each cassette, for automatic control system subway trains operating at a frequency of 135kHz ( "AP-135").	Camex Resolution	50
8471.80.00	12	Units for industrial processing machinery data, which may have 0 to 16 input channels 0 to 2 and output channels 24 bits of resolution, a sampling rate of 51.2, 102.4 and 204,8kS / s for acquiring and / or dynamic signal generation applications for sound and / or vibration.	Camex Resolution	50
8471.80.00	13	Units processing machine of industrial data type analog modules input for acquiring electrical signals, and may be between 2 and 32 channels, sampling rate between 100 and 1 MS / s per channel resolution between 12 and 24 bits for measurement applications electrical quantities.	Camex Resolution	50
8471.80.00	14	thermocouple or RTD (resistance temperature detector) for the acquisition of signals may be between 4 and 16 channels, sampling rate between 14 and 400S / s per channel, 24bit resolution, for temperature measurement applications.	Camex Resolution	50
8471.90.90	5	automated gates for border control "e-Gates" for the purpose of speeding up at the border and safety crossing (supports multimodal biometrics), composed of: document reading module, scanning module fingerprints, facial capture module in accordance with ICAO and door module.	Camex Resolution	50
8473.29.90	4	Keyboards mounted portable electronic payment terminals (POS) with numeric keys and / or alphanumeric and / or symbols and service life time requirement of at least 1 million touches.	Camex Resolution	50
8473.29.90	5	Shielding metal against electromagnetic interference (EMI) and / or radio frequency (RFI) with or without plastic insulation and / or tin alloy plating presented in shape and size specific to use in portable terminals of electronic payment by debit card or credit (POS).	Camex Resolution	50
8473.29.90	6	Steel portable electronic payment terminal holders (pos) obtained from sheets with a maximum thickness of 0.5 mm and designed in specific size and format for internal or external use with maximum angular tolerance of $\pm 0.5^\circ$ and tolerance maximum linear of $\pm 0.2$ mm.	Camex Resolution	50
8474.10.00	4	Screens high frequency vibrating linear motion with long by 4.879mm 4.371mm in height, 5 "decks" independent, rectangular with two 2,5HP engine power and 1.800rpm used in the sieve classification ore particles .	Camex Resolution	51
8474.10.00	28	self-propelled mobile screens for surface mining classification mounted on crawler type "crawler" with hydraulic drive, control and automatic starting of the process and production capacity exceeding 100toneladas / h.	Camex Resolution	51
8474.20.90	5	Mobile crusher for surface ores, self-propelled, displacing crawler system with hydraulic drive with a capacity equal or higher production 200t / h.	Camex Resolution	51
8474.20.90	13	Crusher double cylindrical toothed roller high pressure, low speed and high torque for crushing solid mineral, activated by one or more electric motors and production capacity exceeding 10t / h.	Camex Resolution	51
8474.20.90	36	mobile crushers horizontal displacement of metal tracks, self-propelled, powered by electricity cable 4.160V voltage with a control system using programmable logic controller (PLC), with a receiving hopper and feed through feeder shoes, drive via the cab command or remote control, lance belt conveyor system rotating, lifting and translation, with double roller crusher to crush barren ore capacity exceeding 3.100t / h.	Camex Resolution	51



8474.20.90	44	Mobile crusher for surface ores, self-propelled, displacing crawler system with hydraulic drive with a capacity equal or higher production 220T / h but less than or equal to 225T / h.	Camex Resolution	51
8474.20.90	78	production capacity equal to or greater 9.000t / h, without electrical system composed of: 1 mobile crusher, propelled crawler on metal, comprising: feeding hopper exceeding 150m <sup>3</sup> , shoe feeder, double crusher rollers and belt discharge conveyor provided with lifting and translation system and one moving conveyor transfer propelled onto metal belts, equipped with speed conveyor not less than 3m / s, launches receiving material 45,5m and tilting lance -16 to + 10 ° and cast discharge 49,5m and inclination of the boom - 17 to + 7 °.	Camex Resolution	51
8474.20.90	128	diameter and height of 240mm each, and one ring 1.380mm in diameter and 240mm height, with reducer and drive power of 90kW and 22kW 1 classifier.	Camex Resolution	51
8474.80.10	45	male provided with electrical cabinet panels and programmable logic controller (PLC) and hydraulic unit with automatic loading and blow hydraulic lock of the male box during the blowing cycle and gassing for male cure, with dimensions of 1010 x 780mm table with full mechanical cycle, under vacuum of at most 24 second, sand blasting capacity 40kg, capable of tooling maximum load of 50kN with an area gassing and blowing of 730 x 580mm with clamping force equal to 80KN for the manufacture of males inorganic process.	Camex Resolution	51
8474.80.90	120	Combinations of machines for preparing and mixing sand, automatic, for the manufacture of inorganic sand males composed of: sand heater and cooler capable of 5,2t / h, continuous weighing device capacity 100L sand mixer sand and resin capacity 1,3t / h capacity dosage additive dosage 1.3kg / min with maximum weighing device 10 kg and an accuracy of ± 20g, resin tanks 50L capacity to maintain constant temperature and viscosity, automatic capacity dosage resin 2 liter measuring system and +/- 0.2% accuracy with resin dosing verification station and sand transport carriage for the machine.	Camex Resolution	51
8474.80.90	121	for the production of hydraulic presses ceramic coatings with maximum pressing force closure exceeding 35.000kN, the free distance of 1.750mm between columns, provided with feeding system, device, and device - Basis for stamping, partially disassembled for transport.	Camex Resolution	51
8474.90.00	10	supervision system (automation), cycloconverter control panels, grinding ore, gearless (GMD - "Gearless Mill Drives") with power or greater than 5 MW.	Camex Resolution	51
8475.29.10	62	Equipment for hot molding for the production of glass bottles with 12 sections including base modular sections mechanisms columns and superstructure, capable of operating in dual drops or triplets, with mains and distribution system glass gob, the carrier with electronic pusher , electronic control and timing boards, electric motors for driving peripheral components, interchangeable devices, interface with the operator side panels, bottle transfer system for annealing furnace consists transfer device, transverse conveyor device and the charger.	Camex Resolution	51
8477.10.19	35	provided with: hydraulic pump with servo motors, the clamping unit hydromechanical type with locking force comprised between 20,000 and 40.000kN; thermoplastic injection unit with an electric motor for lamination, with injection capacity between 2,642 and 32.468g (HDPE), with the operation panel of the "touch screen" flat screen and between 21 and 24 inches; may or may not contain system of automatic exchange of molds, for up to 2 molds with 50.000kg each and preheating unit to mold to the standby position. (Wording given by CAMEX RESOLUTION No. 85 OF 09 NOVEMBER 2018)	Camex Resolution	51

8477.10.91	15	without automatic extraction system; with plasticizing and injection unit type "FIFO-A" with a retractable tip, with a volume exceeding 1.600cm <sup>3</sup> ; with heating plates exceeding 560 x 630mm, with a maximum temperature up to 230 ° C; single injection through nozzle or "cold runner block" with two or more nozzles installed; injection pressure exceeding 1.730bar; Hydraulic closing unit with clamping force exceeding 2.500kN; opening stroke exceeding 500 mm; thread diameter exceeding 45mm; with programmable logic controller (PLC); with HMI operating panel with color at or above the screen 10 ", with or without alpha numeric keyboard, with sequence programmable cycles, with temperature control of the heating plates in three areas. (Wording given by CAMEX Resolution 85 OF 09 NOVEMBER 2018)	Camex Resolution	51
8477.10.99	65	hydraulic closing force applied to the center of the movable and fixed plates with the intermediate plate centering system for mold sandwich type 2 or more levels, maximum height cast 1,500 mm and maximum stroke opening 2.475mm.	Camex Resolution	51
8477.20.10	197	Polyethylene (LDPE and MDPE or), with a nominal diameter of 16 to 22mm, wall thickness 0.15 to 0.45 mm, speed up to 220m / minute, inserted drippers 10 to 120 cm, composed of: one driven extruder w / 100kW engine, with a thread diameter of 65 to 85mm and L / D 36 with capacity for up to 240kg / h; Coextrusora 1 to 3kW motor with screw of 20mm diameter and L / D ratio 24 for the injection of colored stripes 1 mm wide; 1 cross head (cross head) with interchangeable male and female parts mounted 90 °; 1 unit of selection, positioning and gotejadoras for up to 1,100 parts per minute; 1 dripper accumulating unit with 19m of caneleta spiral shape; 1 equipment to insert the drip within the PE hose with their respective control panel; 1 set of 4 independent gravimetric supply hoppers to feed the main extruder; 1 vacuum tank calibration 4m long with centrifugal vacuum pump, control cabinet with calipers; Cooling tank 1; Handle with two belt pulling force of 150 kg at a speed of up to 220m minute, one drilling unit with electric cabinet drilling cycle through an LCD panel; 1 hose winding station	Camex Resolution	51
8477.20.10	198	diameter of 62,4mm for producing masterbatche, specific torque of 8.7Nm / cm <sup>3</sup> , maximum screw speed of 600 to 900rpm, maximum torque per 1.124Nm axis with cooled engine and the water control unit, with two side feeders twin screw type vacuum unit; with or without lateral desgaseificadora unit, refrigeration unit, PLC control system, including a full set of auxiliary threads for rapid exchange.	Camex Resolution	51
8477.59.11	19	Hydraulic presses for curing tire bead with a maximum diameter greater than or equal to 24 ', with two independent cavities for housing the molds, closing force greater than or equal to 1.950kN, loading and unloading devices, double post-filling device (PCI) with or without discharge conveyors, hydraulic unit, valve assembly for injecting fluids, pneumatic panel with programmable logic controller (PLC).	Camex Resolution	51
8477.59.11	20	between 17.5 to 24.5 hoops ", with a maximum external diameter up to 1.250mm, the maximum height up to 400mm, maximum width up to 325mm, provided with: one main body endowed system tire internal pressurization through 3 stages of bladder inflating, one top with two cavities for housing segmented dies with force closure to press 4.300kN, two vertical type automatic units for tire supply unit 1 with armrests tire removal, two tire mats output, one programmable logic control panel (PLC) and 1 switchboard with Human machine interface (HMI).	Camex Resolution	51

8477.80.90	303	Equipment for the application of rubbery strips of steel wires at the ends of the casings in construction, with programmable logic control (PLC), dual station for unwinding and subsequent separation of rubberized steel strip of insulating plastic tapes, double station bobinamentos of insulating plastic tapes, accumulators (lung) for the strips and tapes, overhead structure for passage and guidance of the strips to the dual station application, dual-station simultaneous application of the strips at both ends of the casings, railings protection, electrical panel and control panel.	Camex Resolution	51
8477.80.90	311	Equipment vacuum for laminar blocks or sheets of EVA and rubber, in a continuous process, with feedback (loop), progression of the knife and sharpening and regulation of thickness up to 80 automatic programs, triggered by programmable logic controller (PLC) with production capacity ranging between 600 and 2,400 m / h, the maximum working width of 1.600mm, laminating hardness ranging between 3 and 60 ° (expansion density) provided with carrier material to the finished output, including frequency inverter in vacuo and static electricity eliminator.	Camex Resolution	51
8477.80.90	332	(semi-finished tires) for the production of car tire casings with bead diameters comprised between 16 and 24 inches, to the junction of rubber blanket, rubber profiles, rubberized canvas, rubberized fabric strips and steel strips with rubber coated wires or only part of these components (depending on the type of tire to be manufactured), with programmable logic control (PLC).	Camex Resolution	51
8477.80.90	333	tires), for the production of automobile tires with bead diameter comprised between 16 and 24 inches, composed of: station for forming subset outer shell with joint metal belts (tissue metallic rubberised), spiral reinforcing strip and the tread band; the transfer device between stations subset outer casing; Station for forming green tires with sidewalls junction, and internal subset subset outer shell housing, with the pneumatic chambers and facing the flanks roletagem group; arm for discharging green tire; with programmable logic control (PLC).	Camex Resolution	51
8477.80.90	353	production of rubber strips with blades soul metallic cords used in the manufacture of tires for processing blades with thicknesses comprised between 0,70 and 2,00mm, diameter metallic cords comprised between 0,25 and 1,60mm, comprising: one unwinding station of the rubber strip with two positions; a transverse cutting station for forming the blade strips with cutting angle 60 ° variation 15a; 1 strip splicing station; a longitudinal cutting station strips; two strips of reinforcement application stations; Two winding stations with two strips each position; with or without defect detection station.	Camex Resolution	51
8477.80.90	414	Machine for cutting and folding the band safety seal diameter 25 to 38mm plastic closures, with a production capacity 120.000tampas / h, equipped with: 1-feeding silo positioner covers (with mat cascade type), one system of micro-holes detection control in the covers by arcing test, 1 center table with heads and stars carriers for cutting and bending of the band of the seal, one quality control system óticoeletrônico with cameras, conveyor and monitor "touchscreen" integrated 1 pneumatic conveyor system.	Camex Resolution	51

8477.80.90	415	Combinations of automated machines for the production of strips, composed of rubber with different hardness to be united in the rubberized steel ring, generating beads for tires for heavy vehicles, with cycle time of approximately 60 seconds and production capacity equal to or 1.000talões / day, composed of: two processing units and rubber mill with gear pumps and 90mm spindle with a maximum rotational speed of approximately 59,9rpm; 4 automatic temperature control units; 1 transport system and adhesion rubber mats; 1 application unit rubber strip; 1 rubber application unit to metal frames covered by the rubber core to form the tire; 1 automation and control system provided with programmable logic controller drives devices for pressure and sensors and position. (Wording given by JUNE CAMEX RESOLUTION No. 38 OF 05 OF 2018)	Camex Resolution	51
8477.80.90	416	and printed in sizes between 280 and 800 mm height and 220 and 600mm wide, with side fold up to 100mm, with a production capacity of up 60bolsas / minute provided double unwinder for coils of up to 762mm in diameter and 1.524mm wide forklift ready totalizer bags, side bending devices, longitudinal and transverse weld, transverse cutting, bottom gluing with hot melt and operating control panel folding and cutting and registration of printed art.	Camex Resolution	51
8477.80.90	417	laminates and printed plastic film with a maximum output capacity of 240 cycles per minute in the formats 120 to 540mm in height, 60 to 250mm in width with bottom 20 to 45mm deep, equipped with: 1 primary unwinder to coils of up to 800mm in diameter and 1.240mm wide, two unwinders for stock material for the bottom coils of up to 600mm diameter and 150mm width, device bending and insertion of background, device welds the longitudinal and transverse, longitudinal and transverse sections, and mat finished receiving the bags.	Camex Resolution	51
8477.80.90	418	Combinations of automatic machines for the manufacture of dentifrices packaging laminate tubes, pharmaceuticals, cosmetics and other folders with diameters between 16 and 50mm and a length between 80 and 200mm, with solder by electromagnetic induction to laminate and by resistance heating to laminate aluminum-free, automatic feed nozzles (shoulder) and covers the nozzle by intermittent welding process to weld two and two, consumidade 22kVA maximum power with 380V power, machine measures 6,93m length 2m wide and 2.5m high, intake air 1.800L / min with a maximum production capacity of 120tubos / min.	Camex Resolution	51
8477.80.90	419	construction of passenger car tires with a maximum width of the rubber sheet 850 mm and maximum diameter of the rubber roll cut 1.000mm, comprising: unwinding reels roll with strip voltage of 50 to 200 Newton, separation roller guides materials composed of idle rollers and with pneumatically operated drive arm 40 and shear blade cutting width tolerance of 0.5 mm, two winding shafts for winding furniture with drive through rich elec motor, 2-axis side winding to end winding with drive through electric motors, electrical cabinet computerized feeding, pneumatic control cabinet, control panel with 12-inch screen, centralizing the profile cylinder and camera inspection.	Camex Resolution	51
8477.80.90	420	Combinations of machines for cutting textile canvas straps and cauchutada impregnated with nylon coil type "cap ply" used in the construction of passenger car tires with accuracy of +/- 1mm, cut production capacity of one coil each 240 400m seconds comprises: unwinding coil roll with maximum diameter of 800mm and pneumatic axis 40 x 40mm (47mm inflated); 5 blades for shearing bag with a width of 10mm; 3 winding axes of canvas strips 70 with speed 100m / min; Cabinet for electrical power system in 400v / 3; pneumatic control cabinet to control pressure 6bar.	Camex Resolution	51

8477.80.90	421	Automatic equipment for cutting sections of tires of samples with dimensions of between 400 and 1,500 mm outside diameter, cutting width of up to 500mm section of the bead diameter from 12 to 24.5 "(inch), steel wire feed speed 5 to 100mm / min, with a cutting time of 30 minutes, equipped with: 1 treadmill input truck, one shaving unit using steel wires, one coupled dust collector, claws for catching the tires inside the equipment 1 programmable logic controller PLC and HMI equipment body.	Camex Resolution	51
8477.80.90	422	Functional units for frothing tank, headboards and sleepers lines of display and refrigerators injection of the high pressure rigid polyurethane foam and using pentane gas as expanding agent, comprising: polyurethane mixing unit with pentane, port 1 3.750 x 2.025mm mold 2 mold designs for rapid production, the platen 2 3,750 x 1.020mm, rotary drum 1 with dimensions of 4,000 x 1,250 x 100mm plates 7 and for production, 1 injection of high pressure PU 40/40 with 4 injection heads, one injection of high-pressure PU 80/80 with two injection heads, the automatic conveyor lines 3 for loading and unloading substrates heads 2 handlers, 1 pentane security panel, leak sensors gas to exhaust 2 exhaust system, fences light barriers and access to the security system, two 500 liter tanks and set of pumps.	Camex Resolution	51
8477.90.00	400	planar arrays, automatic, suitable for extrusion feed block with 7 layers, with maximum useful width of 2.350mm, with trimming encapsulation system (whether extrusion side trimming), for film production coextruded layers with a thickness of 7 ranging from 30 to 300 microns, produce up to 450 kg / h adjustable thickness adjustment through the exit lip and adjustable width adjustment means "deckels" side. (Composition given by CAMEX RESOLUTION No. 78 21 SEPTEMBER 2017)	Camex Resolution	51
8479.10.10	14	material capable of 13t, 3.265mm wide and 594mm high power (silo base material); screed for applying asphalt layers with electric heating, opening paving between 3 and 9 m, and may or may not contain opening paving from 3 to 6m through hydraulic opening of the table, and a maximum opening paving to 9m through the use of extensions mechanical coupled to the side of the table (Composition given by CAMEX RESOLUTION No. 81 oF 17 OCTOBER 2017)	Camex Resolution	51
8479.10.90	12	rotating stabilization equipment, recovery or mixture of soil and recycling or reclamation of asphalt pavements, with a cutting rotor with the tips of rotating carbide continuous movement with depth control manual or automatic cutter, capable of operating with universal rotor for use in asphalt recovery, combined rotor for use in stabilizing light soils and cuts recovery or recycling of asphalt and soil rotor for soil stabilization with a maximum depth of 508mm rotor width of 2.438mm rotor, with gross power greater than or equal to 350hp but less than or equal to 548HP.	Camex Resolution	51
8479.10.90	46	Machines for concrete leveling with laser technology, with 4-cylinder diesel engine, with power equal to or greater motor 30HP.	Camex Resolution	51
8479.30.00	5	continuing for pre-compressing fiber mats and / or wood particles machines, comprising synthetic fiber straps, two or more pre-compaction rolls, four or more main pressure roller system for height and level adjustment, hydraulic cylinders , cutting heads, exhaust system and filters for collection of debris.	Camex Resolution	51
8479.30.00	9	Machines for continuous formation of mattresses fibers or particles of wood glued with feeders, conveyor belt, track and rotary scrapers.	Camex Resolution	51
8479.30.00	30	Machines for continuous formation of fiber mattresses or glued wood particles; comprises distribution; fiber hopper; fiber forming head; mirroring walls; balance of the mattress; conveyor belt waste; rotating levelers.	Camex Resolution	51

8479.30.00	31	Hydraulic press for continuous production of plates glued wood fibers or particles with a length not less than 32m and the width of the lower heating plate or equal to 3m, provided with: different zones of heating by thermal oil; maximum pressure zones or less 6N / mm <sup>2</sup> ; oil circulation pumps, automatic control of temperature and pressure.	Camex Resolution	51
8479.30.00	32	407mm, a width of 6mm and surface 730cm <sup>2</sup> for manufacturing pellets of 6mm, with a power of 330kW, with a minimum production capacity approximately of 6t / h, with static planar array swivel head with two rollers, hydraulic system, control panels and control equipped with programmable logic controller (PLC).	Camex Resolution	51
8479.50.00	27	Industrial robots mechanical arm made with orbital motions of 3 or more degrees of freedom, load capacity not exceeding 3 kg, electrical panel command, with or without control and programming unit.	Camex Resolution	51
8479.50.00	424	robotic cabin, with a production capacity of 14 green tires per minute; have: wake tire input feeder; Tire tensioner; carousel with claws made of 6 "fingers"; relative rotation between tire and upper nozzles to rotational speed of 120m / min; Lubrication device 6 with spray guns in a robot with liquid delivery system flow control and article identification system by means of a bar code reader, containing the following properties: density (1.3 to 1,46 kg / l), pH (8.0 to 10.5), cps viscosity @ 21 ° C (550 to 2000); drying area and enclosure; positioning output area of the tire; Mechanical brush cleaning.	Camex Resolution	51
8479.81.90	75	Machines for cutting and stripping electric cables and wires with outer diameters capacity equal to or exceeding 10 mm but not exceeding 35 mm, with automatic detection of the cross section of the wire / cable with 4 or speed 4.8m / s , switchboard with electronic control.	Camex Resolution	51
8479.81.90	112	horizontal wire winding machines reels out the cleaning and heat treatment in a continuous process line, with a speed in the range of 1.5 to 30.5 m / min, maximum voltage 1.100mpa maximum capacity of 320,5kg / h to work up to 16 reels simultaneously, with safety PLC.	Camex Resolution	51
8479.81.90	113	For metal working machines, lubrication and drying stainless steel wire, wound in solution at 85 +/- 8 ° C with drying system at 205 ° C safety PLC and exhaust mist elimination system, rated speed of 725kg / hour.	Camex Resolution	51
8479.81.90	114	Machines for treatment of metals, cleansing of stainless steel wire in alkaline solution washing at 85 ° C, double rinse with water, the latter at 50 ° C for grease removal and other debris from the surface of the wires (wires), rated speed minimum 1.5 m / min maximum rated speed 30.5 meters / min with 16 rows and PLC treatment.	Camex Resolution	51
8479.81.90	115	Machines for treating metal, stainless steel for wire lubrication solution at 85 +/- 8 ° C with two propellers, hot air blower and exhaust mist elimination system, with safety PLC, the ability to sixteen lines while wire, minimum rated speed 1.5 m / min maximum rated speed 30.5 m / min.	Camex Resolution	51
8479.81.90	116	Machines for recovery of silkscreen printing formes, with the removal of waste paint and stripping its photosensitized emulsion with a maximum height 1.200mm to 3.000mm and a maximum length up, in continuous work cycle by washing with closed circuit and the products solvents, arrays transport speed electronically processed to endless variations, operating power of approximately 12 kW.	Camex Resolution	51

8479.81.90	425	Roll-forming machines with anti-twist system with double winding for category LAN cable reel 5 and 6, designed for winding configurations in line with the extruder or configured to rewind with unwinding trestle with cutting and product transfer system to the mandrel allowing continuous production and packaging without stopping the line, provided with: roller outer diameter 18 "(45,7cm) 2 collapsible mandrels 8" (20.3cm), 15 "accumulator (38.1 cm) screen HMI to control multifunctional line for air conditioning control panel, 10HP unwinder motor and accumulator system with pulleys 15 "(38.1 cm) diameter capacity of 300 '(100 m) maximum speed of 2,000' / min (610m / min) and minimum voltage 3lbs (1.4kg).	Camex Resolution	51
8479.82.10	137	homogenising, emulsifying and stir liquid, solid and semisolid materials for the manufacture of cosmetics and other liquids and soft materials with a wide range of viscosity and size of specific particles (up to 2 microns), with capacity minimum 2.000L / h and maximum 5.000L / h composed of: programmable logic controller (PLC); Operating panel human machine interface (HMI); CIP cleaning system (Clean in Place); Vacuum system with liquid ring vacuum pump, built in 316L stainless steel; 1 auxiliary tank for mixing the aqueous phase with 5.000L workability with anchor-shaped stirrer, provided with side scrapers PTFE and high shear mixer located in the bottom of the tank, with a shear rate of up to 50.000L / s ; heating and cooling jacketed the sides; positive and negative pressure system; 1 the main mixing tank with 20.000L with stirrer working capacity anchor-shaped, provided with side scrapers PTFE with cleaning nozzles (spray balls) in the areas of shade, high shear mixer located in the bottom of the tank at a rate shear up to 50.000L / s; heating and cooling jacketed the side of positive	Camex Resolution	51
8479.82.10	159	dispersions with particle size 30 to 45µm m and having 1 reactor with two stainless steel stirrers 316L and capacity 4m3, 1 double-jacketed in internal diameter of approximately 1.700 mm and outer diameter of 1.860mm, several circulating pumps, one dispersion equipment for mixing solid stainless steel with a capacity up to 10% of the reactor contents 4t = 400kg / h feeding station 1 for raw materials in bags with a capacity to 1000 liters, various safety devices, electric control devices and one "software" for full management.	Camex Resolution	51
8479.82.10	160	pharmaceutical products used for the manufacture of tablets with programmable logic controller (PLC), consisting of: granulator / mixer with mixing conical vessel with a nominal capacity of 300 liters, stirring blades capable intense and homogeneous mixture, solution spray system; post-granulation mill motor power exceeding 3HP; fluidized bed processor to drying and granulation, with a nominal capacity equal to or greater than 200 liters; Power transfer systems and powder products, wet mass; WIP cleaning systems (Wash-in-place); control unit and inlet air treatment; control unit and treatment of exhaust air due to "Pass Drying Bye" for no contamination of the filters during cleaning operations; solution preparation tank; Device preventing explosions QASV (Quick Action Stop Valve); control panels and electrical panels. (Wording given by CAMEX RESOLUTION No. 96 OF 07 DECEMBER 2018)	Camex Resolution	51

8479.82.10	161	the polymer, bulk forms, liquid resins and oils, for making rubber compound for the production of tires, with a production capacity of 19t / h composed of: upper mixer chamber mixture of 550 liters equipped with compression device "hammer" in S355JRG0 steel (St52-2), operating through hydraulic cylinders with working pressure of 250bar, type rotors "intermeshing" rotation 50 and 60rpm and self-aligning bearings , injector nozzles raw materials and lubricating oil, Pt100 temperature sensor installed in the control chamber and the discharge port, and heating / cooling water flow channels; lower mixer with 1.000 liters chamber, equipped with rotors, temperature sensors and heating water circulation channels / cooling; hydraulic units with 800 liters oil reservoir to the firing hammer and other hydraulic components; Extrusion and calendering unit (TSRD) equipped with 2 identical helicoides, driven by an electric motor and power of 110kW rotation 1.750rpm, coupled with a reduction gearbox torque 57.200Nm, angled at 14 to 16 ° between their center lines inclined at 15 ° with respect	Camex Resolution	51
8479.82.90	30	Machine for classification of fibers or wood particles by fluidizing with fan chamber, separator and exhaust system.	Camex Resolution	51
8479.82.90	73	Screens oscillatory 3 "decks" to separate wood particles in the following waste fractions, outer layer, inner layer and powder for production MDP panel composed of two inlet mouths and 4 output mouths of explosion top cover, injection water side side covers and secured close with quick treatment against twisting structure and capacity of 130m <sup>3</sup> / h with a density of 100kg / m <sup>3</sup> dry basis.	Camex Resolution	51
8479.82.90	97	or not information obtained by sensing X-rays (XRT sensors) responsible for discrimination of materials by their atomic density and information obtained by electromagnetic sensors (Sensors ) responsible for discrimination of materials through their conductivities with feed rate greater than or equal to 150t / h conveyor with working width of 1.2 or 2.4m, with ejector valves 156 or more particles, or without vibrating feeder, control panel and refrigerator "chiller".	Camex Resolution	51
8479.82.90	137	fluidization with air cabin composed classification: sieve type (s) SGF 850 to 3,500 x 33T / h; screw conveyors capable 20.0 / 15,0m <sup>3</sup> / h; Rotary valves capable of 56m <sup>3</sup> / h; fans with volume capacity of air 86.700m <sup>3</sup> / h and pre-filters.	Camex Resolution	51
8479.89.11	90	vertical automatic presses soap weighing 55 to 200g, with stamping between 1 and 5 cavities ability to stamp between 60 and 300sabonetes / min, provided with: programmable logic controller system "setup" quick and easy adjustment weight, treadmills motorized inlet, product outlet and return burrs, with drive servo motor and electrical panel.	Camex Resolution	51
8479.89.11	91	solid dosage materials, system of rotating rollers with variable spacing configuration with feeder spindle taper, based control system PLC with sensitive interface screen color touch, normal operating range from 20g to 20kg / h, based on lactose 0.5 g / cm <sup>3</sup> , and a maximum compaction force of 5.103kg / 50kN.	Camex Resolution	51
8479.89.11	92	pharmaceutical tablets, single output, with theoretical maximum production capacity equal to 216.000comprimidos / h (variable depending on the geometry of the tablets), peak force during the pre-compression zone equal to 80KN, Maximum Strength the main compression zone equal to 80KN with one segmented tower (rotor) 30 punching stations, one automatic pills compliance control (investigatory weight diameter, thickness and hardness), 1 deduster tablets, one detector metal particles in tablets, controlled by a computerized system with dedicated software and human-machine interface (HMI).	Camex Resolution	51



8479.89.11	93	manufacture of calcium hypochlorite tablets with a maximum pressing pressure 100t, 228,6mm stroke length, maximum depth of 203,2mm filling table with floating capacity and speed 50t output between 7 and 25cursos / min, maximum production capacity exceeding 0,72t / h of tablets from 200 to 240g / each.	Camex Resolution	51
8479.89.12	65	input for the manufacture of reconstituted wood panels, with a flow exceeding 240m <sup>3</sup> / h -18t / h and storage capacity equal to or greater than 6m <sup>3</sup> .	Camex Resolution	51
8479.89.12	80	cream and similar, by weighing continuously and precisely, of up to 10.000L / h of cream and to 1.200L / h ingredients have: structure stainless steel on wheels; dosage unit suspended load cells provided 100L tank, with the option of being jacketed stirrer, safety rails with optional metal detection system, tilt window protection from dust, enabling the loading of ingredients on 3 sides equipment at a height of 1.150mm and dosing screws options with chip for each family of ingredients; Feed pump slide ingredient to the ice; mixer to homogeneous distribution of the ice cream ingredient; panel and programmable logic with swivel control panel HMI, enabling control on all sides of the equipment; automatic cleaning system CIP (clean and place); shaker and blender.	Camex Resolution	51
8479.89.12	94	Machines for nodularisation and irons inoculation fused by the addition of cored wire filled with nodularizantes and inoculants directly into the smelting pots, with the possibility of injecting up to three wires simultaneously equipped with a lid for the pan and enclosed cab to avoid Air pollution, smoke suction system and computerized control panel for control of the process with statistical processing of results, 3.000kg for treating cast iron, capable of feeding wire with a maximum diameter of 20mm speed controlled by inverter 5 between and 60m / min, and automatic transfer to the treated metal casting line through AGV.	Camex Resolution	51
8479.89.12	95	extracting equipment / fiber feeders, wood chips and particles for making reconstituted panels (MDF and MDP), can be installed in concrete or metal silos; extraction screw type hydraulic drive and / or reduction motor for rotation, translation and flow equalization, provided with: blast caps, fire extinguishing system, entrainment and / or mats feeder, load cell controlled by interface and automated "software" specially developed capacity less than 5t / h and length less than 1.000mm.	Camex Resolution	51
8479.89.99	8	Equipment for maintenance of ball mill, responsible for transport and positioning of internal mill coatings, working system composed of the crane driven by worm gear reducer with a maximum operating range of 5.512mm, operational control, coating handler mill, fixing hook for coating crane transportation capacity 3.000kg horizontal boom driven by hydraulic motor and maximum range of 7.391mm boom, to feedblock power supplied to the motor by a handler "TEFC" phase mounted on feet horizontally and directly coupled to a piston pump with a volume variable pressure offset translation for 4 wrought steel wheels with polyurethane tires.	Camex Resolution	51
8479.89.99	9	Extractors coatings and coatings screws of ball mills based on pneumatic impact hammer semi-automatic, comprising: first and cylinder assembly pushbutton, which fires, fires impact energy between 61 to 4.340J operated pneumatically consuming 2,286 Lpm at pressures of 340 to 1.030kPa.	Camex Resolution	51
8479.89.99	97	Machines for processing electrical cables and wires, cut at the required length, stripping and applying terminals and / or connectors and / or sealants seals with monitoring the quality of implementation, feeding speed of the wire not less than 6m / second but less than or equal to 12m / sec.	Camex Resolution	51

8479.89.99	212	Machines for the assembly of markers, mechanical drive and pneumatic to electric and electronic control and digital programming, provided with set of electromagnetic vibrators with conveyors for feeding the bodies, the wick introduction ink filling, including the cap body, the tip of the insertion of the felt , attaching the lid counting production, packaging and disposal of defective parts.	Camex Resolution	51
8479.89.99	213	Machines for the assembly of ballpoint pens, mechanical drive and pneumatic to electric and electronic control and digital programming, provided with set of electromagnetic vibrators with conveyors for feeding the bodies, burning bodies, tubes, ferrules adapter cap, charge ink filling, centrifugation, writing test and closing of the lid, eliminating defective parts, pen unit count and packaging.	Camex Resolution	51
8479.89.99	214	vertical machines for mechanical pencils assembly, mechanical drive and pneumatic to electric and electronic control and digital programming, provided with set of electromagnetic vibrators for feeding the bodies, burning bodies, placement mechanism, tip, graphite, clips, button, rubber door and testing, eliminating defective parts count and packaging.	Camex Resolution	51
8479.89.99	215	Machines for assembling felt pens, mechanical drive and pneumatic to electric and electronic control and digital programming, provided with set of electromagnetic vibrators with mats for feeding the bodies, burning of bodies in "hot stamping", assembly of parts and components, fuses, caps , ends with ink injection, cap placement, removal of defective parts count and pack the portfolio.	Camex Resolution	51
8479.89.99	218	containers with four mold cavities 12 each upper fill volume to 50ml, capacity 7.500peças / minute, integrated conveyor for automatic machines with two welding caps.	Camex Resolution	51
8479.89.99	219	Machines for stacking sheets for motorcycles batteries with high capacity plates with between 50 and 110mm, a width between 45 and 80mm and a thickness between 0.75 and 3mm, with varying production speeds of 20 to 40m / min, the unit containing separation and counting cards, and divergent conveyor programmable logic controller.	Camex Resolution	51
8479.89.99	240	Equipment for the assembly of aluminum electrolytic capacitors, equipped with unloading of the pre-assembled component, introducing the disc mug, crimping, rebordeado, electrical test, and shrinkage of the insulating insert of the insulating	Camex Resolution	51
8479.89.99	241	Equipment for pre-assembly of aluminum electrolytic capacitors, equipped with fold "tab" and coil insertion mug, welding of the "tab" on the mug, ultrasonic welding of the "tab" on the disc, bending of the "tab" and unloading component.	Camex Resolution	51
8479.89.99	251	Automatic machines encasement (pressing) of surgical needles in only one suture wire ends, with 25 to 30ciclos / min production capacity of between 800 and 1.350unidades / hour, needle feed device, needle positioning device unwinder thread, the thread tension diameter checker, engomador the yarn end, patterning length, cutting and yarn insertion needle, pressing device, encasement strength test device (press), and approval or disposal of the product.	Camex Resolution	51
8479.89.99	252	buffer sets ( 'plug' ) double endowed buffer ( 'plug' ) of top cap ( ' plug " ) of the bottom and release sleeves for cementing subsea oil wells coated size of 9 <sup>5</sup> / <sub>8</sub> to 20.0, "caps ( 'plugs" ) made of glass fiber, polymer and synthetic rubber, working temperature up to 300 ° F.	Camex Resolution	51

8479.89.99	253	rings used in manufacturing tires, having a diameter between 16 and 24 inches, equipped with: 1 unwinder 1.330mm coils; 1 table redirection; 1 overhead conveyor textile product; 1 compensator; 1 coater rims with automatic cutter head and motor with adjustable coating roller coating; 1 for splicing press and identification of the rim; 1 robot to transfer and palletizing with tweezers system; 1 standby position to verify the operator of electrical panels and pneumatic control and human-machine interfaces, with minimum flow of 0.4 kg / min and a maximum of 1.3 kg / min and coating capacity of 5,000 frames per day	Camex Resolution	51
8479.89.99	254	base and low antimony molded gravity casting used in the manufacture of automotive type batteries VRLA with the capacity to handle between 20 and 50m / min varying according to the dimensions plates and the maximum height of the formed piles 300mm capable of working plates with a maximum length between 85 and 170mm and a thickness of 0.75 to +/- 3mm, provided with two motorized belts with holes with 5kW power interconnected to centralize plates with enclosure to prevent leakage of lead dust particles into the atmosphere, structural parts stainless steel corrosion-proof, checking, sorting and reject non-conforming adapters or not aligned to segregation compartment stacking controlled descent plate mechanism with a photo-sensitive cell, the programmable logic controller (PLC) and HMI.	Camex Resolution	51
8479.89.99	255	provided with: feeding stations components, rotating station assembly scrap system, control and monitoring system with programmable logic controller (PLC), pneumatic system (6bar), three-phase electrical system supply voltage of 400VAC, 50Hz by; with nominal production capacity of 40.000peças / hour.	Camex Resolution	51
8479.89.99	256	Semiautomatic machine for making biodegradable substrate pots with substrate materials for automatic filling and automatic dispenser with paper pots combination over the substrate; maximum production capacity of up 18.000potes / hour with diameters between 15 and 80mm and height up to 240mm, in case funnel-shaped blender with substrate storage capacity of 200 liters, vacuum pump and air compressor 3,0kW 260Litros / minute.	Camex Resolution	51
8479.89.99	257	automatic washing machines, decarbonise and sterilize cars and non-ceramic utensils from the power industry, water heating by electrical resistance or by steam, made of stainless steel AISI 304, equipped with control panel "touchscreen" with one airtight chamber with watertight door controlled by the magnetic sensor and rotating platform with alignment sensor equipped with wash nozzles for high pressure and low pressure rinse nozzles and recirculation of water filters with well volume of 185 and 320 liters; minimum internal dimension of 800 x 680 x 1,900mm and a maximum of 1,000 x 1,000 x 2,000mm; and minimum external dimension of 1.950 x 1.425 x 2.750mm and maximum of 2,450 x 1,820 x 2.900mm, at least 12kW and maximum power of 40kW and 400V voltage to 3F + N + T / 50Hz equipped with adjustable feet, button emergency and general switch.	Camex Resolution	51

8479.89.99	258	automatic machines to complement and electrolyte solution for leveling automotive batteries / trucks, type "flooded" with level control by suction with accuracy of +/- 1 mm and protection against "overflow" capacity for up to 6baterias / minute and up to 200Ah to 10baterias / minute up to 100Ah, equipped with add-on unit and leveling electrolyte, conveyor and structure in 316L stainless steel, level conference unit with rejection station and mat stainless steel 316L, voltage test (OCV) ability to operate with templates batteries 1 x 6 and 2 x 3, the rapid exchange system, electrolyte holding tank with pumping system reject diaphragm pump, programmable logic controller (PLC) integrated with the man machine interface (HMI) sensitive to the touch, with color screen, VPN router for remote connection, collective protection system equipped with protections in polycarbonate and structure in 316L stainless steel, sensors in the doors for immediate stop in case d and opening and emergency buttons.	Camex Resolution	51
8479.89.99	259	servo controlled systems: induction heating, load cells, monitoring the presence of components by linear transducers, the presence of components sensors, system inspection for "scanner", rollers, computer, monitor, "software" PLC and integration of system detection "Goodness Factor" and device for mounting accessories for the product in the family of 9, 10 and 11".	Camex Resolution	51
8479.89.99	260	Machines for unwinding cotton strips in rolls, for up to three rolls with a maximum diameter of 800mm x maximum width of 300mm, 50mm drilling step, provided with belt conveyor, vertically slit group and transversal band a distance of about 50mm drive guide rollers, two longitudinal cutting knives, knives two longitudinal pre-cut transverse cylinder contracilindro with pre-cut to 50mm bands distances, and control panel.	Camex Resolution	51
8479.89.99	261	Equipment for flow control, and lubricating oil temperature and the internal combustion engine cooling water in power generating sets with 11.676kVA, provided with: automatic washing unit turbocharger provided with two pneumatic valves; electrical pre-heating unit with circulation pump and electric heater; Thermostatic valves.	Camex Resolution	51
8479.89.99	262	automatic formation of lead acid batteries by immersion in a water bath equipment, used in the electric charging automotive type batteries "flooded" and stationary VRLA endowed of: forming table with two separate lines for up to 224 batteries each with suction system and purification of gases generated during the formation, with a nominal flow 42.000m <sup>3</sup> / h motorized conveyors input and output to battery forming table, with or without pre-feeder, with or without automatic positioner, electrical panels with PLC control of the training and or central supervision system.	Camex Resolution	51
8479.89.99	263	Equipment for siliconizing hypodermic needles, provided with: racks for needle feeding system, positioning tray racks in 6 different tracks, silicone supply system, silicone dispenser, silicone application assembly on the needle by means of pads, blowing and vacuum cleaning system, index, UV kiln inlet conveyor and UV curing station, controlled by the PLC, with capacity for up siliconizar 1.500peças / min.	Camex Resolution	51
8479.89.99	264	Automatic modular equipment inoculation and planting liquid biological samples and non-net via the magnetic cylinders technology, provided with: inoculation module and sowing liquid samples and inoculation module and seeding no liquid samples, capable to inoculate and sowing until the AF module 78 amostras/h (liquid samples) until 209amostras / h in the SA module (non-liquid samples).	Camex Resolution	51

8479.89.99	265	sodium automatic insertion machines for hollow valve for internal combustion engines, with an estimated 7 seconds per cycle piece, insertion of up to 1 g sodium valve and a mass tolerance of +/- 0.005 grams sodium endowed automatic system for loading and unloading parts.	Camex Resolution	51
8479.89.99	266	structure equipped with stainless steel, two vibratory feeders measures 1,000 mm in diameter and each digital control; with conical stainless steel bowl and sensors for regulating flows with minimum discharge capacity 150medidas / min each; with elevating and funnels carrier for input measures pneumatic control system for the transport of spoons with oil separator and filter in the air supply, transportation to mats dispensers and containers, driven by variable speed drives, presence sensors for transport, control by a PLC (programmable logic control) and sensitive to the touch control panel for operation.	Camex Resolution	51
8479.89.99	267	flour tortilla inspection visual systems capability to inspect 150 mass units per minute (diameter 25cm) and 900 units per minute (diameter 18cm) equipped with automatic tortillas rejection system, dimensional analysis software, "LCD display "conveyor system integrated 137,16cm wide, IP65 protection system box ethernet" UPS "and" screen "touch screen, power supply 460V, three phase, 60 Hz.	Camex Resolution	51
8479.89.99	268	Automatic machines for decorative coatings on surfaces of metal fittings, vacuum system PVD (Physical Vapor Deposition) provided with an octagonal prism camera turntable, useful diameter of 1.000mm and 1.100mm useful height, equipped with three turbomolecular pumps system magnetic bearings multi-axis industrial a dry screw pump system (without oil), three sources of erosion by cathodic arc LDE (CAE) and 5 mass gas flow controllers and steam condensation water system.	Camex Resolution	51
8479.89.99	269	machines for final assembly Combinations of plastic caps on the valve camshaft, with a production capacity of 60tampas / hour, comprising: first application station 3 brass inserts through first automatic feed and induction heating to 400 ° C, and mounting two valves, one station for assembling two floating valves welded 20kHz ultrasound procedure; 3 radial seals fed one by one with the electric axis of displacement, mounting screws 10 of one station with the respective bushings 4 and prisoners; First checking station components and sealing test for the pressure difference in two channels, recording the product code, with all interconnected programmable control stations and controllers.	Camex Resolution	51
8479.89.99	270	batteries, such as "flooded" and VRLA with structure in stainless steel AISI 316L, with a nominal working capacity batteries from 4.5 to 6 / min, provided with: a selection mechanism and orientation of hydrometers through circular vibrating tray linear vibratory conveyor for targeting of hydrometers, mounting station "pick and place" equipped with pneumatic clamps for insertion of hydrometers the battery boxes and device for press fit of hydrometers the housing of battery cover, capable of moving in 3 axes by means of pneumatic cylinders and roller conveyor in stainless steel AISI 316L for moving the batteries processed with programmable logic controller (PLC).	Camex Resolution	51

8479.89.99	271	automatic filling machines sulfuric acid solution in lead-acid batteries models 1 x 6 and 2 x 3 type "flooded" have: 3 heads with a volumetric filling by gravity in two stages, anti-drip control, entry mats and independent output capable of producing automotive batteries and truck with a nominal capacity of 5 batteries per minute, fitted with electromagnetic flow meters, automatic adjustment of the filling heads, collective protection system equipped with protections in polycarbonate and structure of 316L stainless steel, sensors in the doors for immediate stop in case of opening and emergency buttons, with supervision command and control through Programmable Logic Controller (PLC), human machine interface (HMI) touch, with color screen and VPN router to connect remote.	Camex Resolution	51
8479.89.99	272	Tunnels continuous washing and machine drying automotive batteries and trucks, such as "flooded" and VRLA with polypropylene structure, with a capacity of up to 20 batteries / minute, fitted with: pressurized water washing station with recirculation and drainage of the wash starting with a nominal capacity to drain 100 liters of water to the treatment plant, rinse station with water, nozzles for cleaning and rinsing the top, sides and bottom of the batteries divided mat of nozzles for directing water at the bottom batteries, a system for recirculation of water, filtering and heating to 60 ° C washing section provided with third motorized brush to remove dirt and acid from the top and sides of the batteries, water reuse tank in rinse station, drying station with three stages, each stage provided with five nozzles hot dry air generated by turbo-blowers loaded with a maximum temperature of 56 ° C with control Lador programmable logic (PLC).	Camex Resolution	51
8479.89.99	273	tubular devices for rolling and unrolling curtains, blinds or awnings, with nominal torque (NM) between 10 and 50, speed between 12 and 19rpm, tube diameter 45mm, 120 or 230V, 50 or 60Hz power rating between 146 and 300W, limit regulation system, inner plug, starting capacitor motor, brake system and reducing the outer tube.	Camex Resolution	51
8479.89.99	274	460Vac / 60Hz / 3PH, power consumption of 5.5 to 10kW, the tank capacity of 270 to 500 liters, recoverability from 100 to 200NL / min and pressure maximum gas supply 11.100kPa abs (110barg) applied to leak testing of heat exchangers, equipped with a 32bit microprocessor control, HMI screen "touchscreen", high and low pressure storage tanks, safety valves, vacuum pump and compressor.	Camex Resolution	51
8479.89.99	275	and moisture and hold "flushing" (cleaning) the system used in heat exchangers tightness test applied to air conditioning systems with microprocessor control 32bit, arranged HMI screen 'touch screen', rotary vacuum pump with double stage ability to achieve vacuum- $\Phi$ Pa 1x10 (1 x 10-4mbar) with pneumatic valve and to maintain the vacuum sensor for measuring the vacuum level reached.	Camex Resolution	51
8479.89.99	294	Automatic machines for winding electrical capacitors, with a maximum winding speed of less than or equal to 15 m / s.	Camex Resolution	51
8479.89.99	296	Automatic assembly for electrical capacitors machines with maximum production speed exceeding 25peças / minute.	Camex Resolution	51
8479.89.99	317	Automatic machine to fix by gluing, straws bagged in packaging carton with the application head 2 points glue type "hot melt" with maximum capacity exceeding 4.500embalagens / hour.	Camex Resolution	51
8479.89.99	348	Machines for preparing blood slides (swab) for use in hematological accountants.	Camex Resolution	51

8479.89.99	757	immersion, automated, provided with: filter with laminar flow of clean air, air conditioning unit, water deionization unit and air dehumidifier, compressed air min. 30CFM to 6 bar, standard CDA 0,01u closed water circuit, 5 ° C, exhaust min. 1.500CFM to 15MPa, with inlet pipe DI water for ½ "and drain 1", both SS 316, with dimensions of 950 x 4.055 x 2.400mm.	Camex Resolution	51
8479.89.99	770	clipping machines with handling bars adjustable in height, for use in applying and removing rail fastening clip track.	Camex Resolution	51
8479.89.99	835	Machines for control by numerical control and panel "touchscreen" 15 "ergonomic position to perform asperação through a wire brush or mill and applying adhesive or primer in the pair of the base synthetic shoes simultaneously with two independent sliding head , speed control, tilt and independently adjustable work head pressure at each point to point, rescue and data transmission through USB port, locking and unloading of the material by means of photocell barrier.	Camex Resolution	51
8479.89.99	843	Machines for opening and closing gates of different types in bulk wagons, electro-hydraulically actuated and operated manually via remote control, for application over a hopper discharge may, via operator command, move on a monorail, so that they can reach all the floodgates of wagons to be unloaded.	Camex Resolution	51
8479.89.99	864	Machines for control by numerical control and panel "touchscreen" 15 inch ergonomic position to perform the application of adhesive or primer in the pair of the base synthetic shoes, speed controls, tilt and pressure regulated independently rescue and transmission data through USB port, locking and unloading of material through photocell barrier.	Camex Resolution	51
8479.90.90	3	manufacture of particle board, wood fibers or chips, in length equal to or greater than 30.000mm, the thickness exceeding 1.9mm and width exceeding 1.850mm .	Camex Resolution	51
8479.90.90	37	oil wells with subsea coating Size 95/8, 97/8, 103/4, 133/8, 135/8, 14 ' and 18 ".; internal diameters from 8.515 to 16.615" and the collapse pressure of 8179 15.877psi (Composition given by Decree No. 391 SECINT MAY 07 2019)	Camex Resolution	51
8480.71.00	45	Molds for use in high pressure injection wells 64, made of special steel and injection system with its own preforms used in the production of parts of polypropylene pens and markers capable of producing 128peças / cycle.	Camex Resolution	51
8480.71.00	62	road, radial or not, high precision, used in the manufacture of tires with maximum outer diameter greater than or equal to 1.100mm, with or without bead rings.	Camex Resolution	51
8480.71.00	94	Sets of molds for use in high-pressure injection with 1-2 cavities, made of special steel and injection system with forms, with or without hot internal channels, with operating temperature between 200 and 285°C, with application technologies of laser fusion, mashing technology or injection technologies at low pressure on leather or fabric covering, for the production of pillars and parts thereof for use in motor vehicles, 1-3 colors simultaneously or 1-2 colors with the addition of rubber.	Camex Resolution	51
8480.71.00	120	between centers 85V 50 x 114 to 180H for the production of preforms of polyethylene terephthalate (PET), weighing 7.0 to 60g and tolerance of ± 0.5g and production capacity equal to or greater than 5.925pré-shapes / hour.	Camex Resolution	51

8480.71.00	121	Molds with a maximum error tolerance and 0,005mm minimum efficiency of 80%, consisting in greater minimum hardness material than or equal to 52HRC but less than or equal to 58HRC; cavities 32, insulating plates, ejection system in parallel, or less cycle time to 10 seconds, the operation assurance least 1.5 million impressions and life expectancy to 15 million impressions; with operating temperature for melting the plastic equals 210 degrees and for operation of the mold between 50 and 60 degrees; may contain interchangeable sets of spare parts for all components of the wells; Custom designed for making plastic rods for the piston semiautomatic disposable pen for administration of insulin in diabetic patients.	Camex Resolution	51
8480.71.00	122	forming system for manufacturing plastic caps, each with males, cavities and other moldantes components produced in special metals, with capacity equal to or exceeding 450peças / min with minimal cycle time equal to or greater than 1,44s, for closures having a diameter not exceeding 18mm, height covers not less than 21mm. (Wording by resolution No. 11, 30 January 2020)	Camex Resolution	51
8480.71.00	123	polyethylene terephthalate (PET) 13.7 g, weight variation of $\pm 0.20g$ , with an injection capacity of 128peças / cycle and cycle approximately 11,0s with stripper plate to remove the preforms, the transfer plate and block for cooling at 4 positions.	Camex Resolution	51
8481.20.90	15	made of cast steel, having sealing bidirectional sealing, capable of severe service of vacuum pressure to 100psig (7bar) and temperature up to 750 ° F (400 ° C) with 6 diameters of 12 ", pneumatic actuator system of high performance with proximity sensors opening cycle / pulse closure 20ms, sealing surfaces made of stainless steel with high hardness, pressure class 125 300 lbs.	Camex Resolution	51
8481.20.90	16	Pneumatic valves exclusive vacuo to industrial machinery manufacturer of paper and pulp, with dimensions of 65, 80, 100 and / or 150 mm inner root diameter of the air and vacuum passage body, accompanied by vacuum transmitter, accessories, may or not keep control panel.	Camex Resolution	51
8481.20.90	38	stainless steel body 316L, driven by double coil to open and close by electric pulses, for regulating the subsea production of oil and gas, with operation capacity deep waters up to 3,000m, working pressure between 69 and 1.137bar.	Camex Resolution	51
8481.80.39	5	Kits for use compressed natural gas (CNG) for managing the flow of gas engines to 180hp, operating temperature of -40 to 120 ° C, with or without valves cylinder and supply the cylinder with or without fiber steel with CNG storage TYPE 2, provided with pressure reducing valve which reduces the pressure of 220bar to the line pressure, allowing the pressure range from 0.8 to 4.000mbar and CNG to flow 43m <sup>3</sup> / h for feed motors, pressure gauge / pressure gauge and level flute with the sequential nozzles and temperature and pressure sensors for gas and temperature sensor for water, e manager system microcontroller switching key, low pressure filter, electrical wires and interconnection connections. (Wording given by RESOLUTION No. 11 oF 30 JANUARY 2020)	Camex Resolution	51
8483.40.10	62	Reversers a reduction of 1,964: 1, 7 ° angle downwards direct mounting for engagement in diesel engines with maximum torque and maximum 1.800rpm 2.374Nm the output rotation 3000 rpm, for the implementation of continuous work vessels maritime and inland waterway use.	Camex Resolution	51
8483.40.10	63	Reversers a reduction of 1,767: 1, 7 ° angle downwards direct mounting for engagement in diesel engines with maximum torque and maximum 1.800rpm 1.721Nm the output rotation 3000 rpm, for the implementation of continuous work vessels maritime and inland waterway use.	Camex Resolution	51



8483.40.10	64	Reversers a reduction of 1,964: 1, 7 ° angle downwards direct mounting for engagement in diesel engines with maximum torque and maximum 1.800rpm 1.721Nm the output rotation 3000 rpm, for the implementation of continuous work vessels maritime and inland waterway use.	Camex Resolution	51
8483.40.10	65	Reversers a reduction of 2,478: 1, 7 ° angle downward with direct mounting for engagement in diesel engines with maximum torque and maximum 1.800rpm 1.985Nm the output rotation 3000 rpm, intended for application in medium and continuous work vessels maritime and river use.	Camex Resolution	51
8483.40.10	103	Reversers a reduction of 2,037: 1, full V-mount direct drive with angle of 14 ° for engagement in diesel engines with maximum torque and maximum 1.800rpm 1.696Nm the output rotation 3000 rpm, for applying working medium in vessel maritime and river use.	Camex Resolution	51
8483.40.10	104	Reversers a reduction of 1,962: 1, with direct mounting angle angled 8 ° for engagement in diesel engines with maximum torque of 665Nm 1.800rpm and the maximum output rotation 3.200rpm intended application medium in use and continuous work vessels maritime and inland waterway.	Camex Resolution	51
8483.40.10	105	12 ° for engagement in diesel engines with maximum torque of 693Nm 1.800rpm and the maximum output rotation 3.200rpm intended for application in medium and continuous work maritime and inland waterway vessels use.	Camex Resolution	51
8483.40.10	106	Reversers a reduction of 2,037: 1, with direct mounting angle angled 7 ° for engagement in diesel engines with maximum torque and maximum 1.800rpm 1.486Nm the output rotation 3000 rpm, intended for application in medium and continuous work vessels maritime and inland waterway use.	Camex Resolution	51
8483.40.10	107	Reversers a reduction of 2,000: 1, with direct mounting angle angled 7 ° for engagement in diesel engines with maximum torque of 740nm and maximum 1.800rpm the output rotation 3.300rpm intended application medium in use and continuous work vessels maritime and inland waterway.	Camex Resolution	51
8483.40.10	108	Reversers a reduction of 2,208: 1, with direct mounting angle angled 7 ° for engagement in diesel engines with maximum torque of 865Nm 1.800rpm and the maximum output rotation 3.300rpm intended application medium in use and continuous work vessels maritime and inland waterway.	Camex Resolution	51
8483.40.10	109	Reversers a reduction of 2,322: 1, full V-mount direct drive with angle of 14 ° for engagement in diesel engines with maximum torque and maximum 2.100rpm 1.037Nm the output rotation 3.300rpm, for applying working medium in vessel maritime and river use.	Camex Resolution	51
8483.40.10	113	Transmissions of the type "tail" for use in vessels, hydraulically actuated vertical tilt system, exhaust combustion gases done by itself "tail" conical clutch coupling, with cuts, forward and reverse, 1.59: 1 or 1.63: 1 or 1.76: 1 or 1.85: 1 or 1.96: 1, with or without transom ( "transom").	Camex Resolution	51
8483.40.10	114	vertical tilt system, exhaust flue gases made by one's own "tail", conical coupling clutch, with reductions, forward and aft, 1.43: 1; 1.51: 1; 1.60: 1; 1.66: 1; 1.79: 1; 1.89: 1; 1.97: 1; or 2.18: 1 with or without transom ( "transom"). (Composition given by CAMEX RESOLUTION No. 78 21 SEPTEMBER 2017)	Camex Resolution	51
8483.40.10	115	actuated vertical tilt system, exhaust combustion gases done by itself "tail" conical clutch coupling, with cuts, forward and reverse, 1.59: 1; 1.70: 1, 1.82: 1, 1.84: 1; 1.88: 1; 1.94: 1; 1.99: 1; 2.08: 1 or 2.40: 1, with or without transom ( "transom"). (Composition given by CAMEX RESOLUTION No. 78 21 SEPTEMBER 2017)	Camex Resolution	51

8483.40.10	116	Transmissions of the type "tail" for use in vessels with vertical tilting system actuated hydraulically combustion gas exhaust system made by own "tail" conical coupling clutch system with reductions, forward and aft of 1.78: 1 or 1.95: 1 or 2.14: 1 or 2.32: 1, with or without transom ( "transom").	Camex Resolution	51
8483.40.10	175	2-speed gearboxes with planetary gears, with reductions of 1: 1 to 1: 4 or 1: 1 to 1: 3.17, the rated power of 39kW or greater, 1.000rpm rated speed or higher, maximum speed of 5,000 rpm input or higher and nominal torque 250Nm input or higher, used in turning operations centers and horizontal and vertical machining.	Camex Resolution	51
8483.40.10	176	Gear Boxes for multiplication rotation and torque transmission for application to wind turbines with three stages, with a rated speed of 13.4 revolutions per minute input (rpm) with speed multiplication ratio may vary from 1: 111 to 1: 112, with nominal torque 1.948kNm input and the nominal mechanical input power between 2,733 and 2.734kW.	Camex Resolution	51
8483.40.10	177	Gear boxes for multiplication of rotation and torque transmission, for use in wind turbines with 3 stages of multiplication and 1-stage planetary gear and 2-stage helical gear with rated speed rotor input of 15,76rpm, with respect to speed multiplication of 1: 118.052 and rated power of 2.310kW rotor.	Camex Resolution	51
8483.40.10	180	Reversers with reduction 1.97: 1 forward and aft; and the nominal ratio of 2: 1 for coupling with diesel engines maximum output of 75kW (0,030kW / (r min-1)) and the maximum output speed 2.500rpm intended for application in continuous work vessels. maritime and river use. (Wording given by ORDINANCE SECINT # 220 OF 25 FEBRUARY 2019)	Camex Resolution	51
8483.40.10	181	Reversers real reduction 3.95: 1 and a nominal ratio of 4: 1 for coupling diesel engines at full power 98kW (0,039kw / (r-min-1)) and the maximum output speed 2.500rpm intended to application for continuous work in maritime and inland waterway vessels use.	Camex Resolution	51
8483.40.10	182	Reversers actual reduction to 4.11: 1 and a nominal ratio of 4: 1 for coupling diesel engines at full power 230kW (0,115kW / (r min-1)) and the maximum output speed 2,000rpm intended application continuous work in maritime and inland waterway vessels use.	Camex Resolution	51
8483.40.10	183	Reversers actual reduction to 3.04: 1, and nominal ratio 3: 1 for coupling diesel engines at full power 230kW (0,115kW / (r min-1)) and the maximum output speed 2,000rpm intended application continuous work in maritime and inland waterway vessels use.	Camex Resolution	51
8483.40.10	184	Reversers actual reduction to 3.95: 1 and a nominal ratio of 4: 1 for coupling diesel engines at full power 57,5kW (0,023kw / (r min-1)) and the maximum output speed 2.500rpm, for the application for continuous work in maritime and inland waterway vessels use.	Camex Resolution	51
8483.40.10	187	Reversers actual reduction to 5.06: 1 and a nominal ratio of 5: 1 for coupling diesel engines at full power 202kW (0,101kW / (r min-1)) and the maximum output speed 2,000rpm intended application continuous work in maritime and inland waterway vessels use. (NCM and No. Ex altered by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51
8483.40.10	188	Reversers actual reduction to 3.04: 1 and a nominal ratio of 3: 1 for coupling diesel engines at full power 98kW (0,039kw / (r min-1)) and the maximum output speed 2.500rpm intended for use in ongoing work on maritime and inland waterway vessels use. (NCM and No. Ex altered by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51

8483.40.90	22	gearing for torque transmission ball mill for cement grinding, made of steel with a diameter on the outer surface of the teeth exceeding 6.200mm, a width 600 mm and number of teeth greater than or equal to 230 teeth, may or may not contain pinion shaft constructed of steel with an outside diameter exceeding 480 mm, width of the contact area exceeding 800mm, length exceeding 2.700mm and number of teeth equal to or more than 19 teeth.	Camex Resolution	51
8483.40.90	24	3961, or less than 5 pitch diameter and the upper crown to 4.000mm. (NCM and No. Ex altered by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51
8483.90.00	24	Ball spindle rolled bars threaded in Gothic profile, steel Cf53 medium carbon, heat treated with hardness 58HRC, machined with high standards of dimensional accuracy and geometric tolerance according to DIN, JIS and ISO, in environments - 10 to 80 ° C with temporary peaks up to 100 ° C, accuracy class ISO 5 to 23µm pitch deviation / 300 mm according to ISO 3408-3 standard length 13.000mm between 55 and nominal sizes and up Ø 6 Ø 80mm in steps 1, 2, 2.5, 5, 10, 16, 20, 25, 32, 40 and 64mm. (NCM and No. Ex altered by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51
8501.52.90	1	Motofusos for machining of ferrous and nonferrous products tool holder characterized by: synchronous and asynchronous drives, maximum speeds between 6,000 and 30,000 1 / min powers between 19 and 80kW, torques between 20 and 1.270Nm, outside diameters between 150 and 360 mm, 1 or 2-lubro channels for coolant connection 80 and a maximum pressure of 140bar interface for tools HSK63 cones HSK100.	Camex Resolution	51
8502.13.19	19	horizontal metal base consisting of: 20-cylinder diesel engine, 4-stroke, rotation of 1.800rpm, water cooling, fitted with synchronous generator, AC, 60Hz, 4.160 tension between the phases 13.800V with power factor of 0.8, with closing star accessible neutral poles 4, 0.6667 step, isolation class F, IP 23, cooling system fan mounted on the shaft itself generator, brushless excitation system, automatic digital voltage regulator with phase sensor and digital control panel.	Camex Resolution	51
8502.40.90	1	(UPS ROTARY) with power between 400 to 2.000kVA, maximum speed of 1,800 to 3.600rpm, made up of synchronous electric generator and energy accumulator, mounted on a metal base, accompanied control panel and power panel.	Camex Resolution	51
8503.00.90	10	Rotor torque motor, synchronous or asynchronous with power ratings between 40kW and 0.5, rated speed of between 20 and 3.000L / min and rated torque between 4 and 6.500Nm.	Camex Resolution	51
8503.00.90	11	Stators torque motor, synchronous or asynchronous, with water cooling with power ratings between 40kW and 0.5, rated speed of between 20 and 3,000 1 / min and the rated torque between 4 and 6.500Nm.	Camex Resolution	51
8504.40.90	8	Inverter frequency, integrated between power voltage 400 (-20%) 480 (+10%) VAC, 50 or 60Hz three-phase, rated input current 110, 220 or 330A, exchanging signals by I / O discrete or industrial networks, with or without adaptive control used exclusively in welding systems, power output with fixed frequency of 1 kHz.	Camex Resolution	51
8504.90.30	2	Cylinder body potential with aluminum and paper insulation, to reduce the primary voltage with coils of copper wire turns 15000-60000 and outer diameter of up to 363mm electrode applied exclusively on the inductive voltage transformer.	Camex Resolution	51
8504.90.30	3	reduce the electric field to ground potential, with up to 40mm diameter tube, up to 6mm thickness of the tube length up to 2.770mm and insulation diameter 170mm, applied in inductive voltage transformers and current transformers.	Camex Resolution	51

8514.10.10	77	temperature between 500 and 1150 ° C (932 and 2102 ° F) for stainless steel wire for input of stainless steel wires min 0 diameter , 69mm and temperature 1113 ° C with an accuracy of plus or minus 3.5 ° C and 3.4 mm diameter and 1,063 ° C temperature with an accuracy of plus or minus 3.5 ° C, and steel wire output stainless after the minimum diameter of 0,69mm and annealing temperature of 35 ° C and a maximum diameter of 3.4 and 35 ° C, according to the input wire diameter, minimum rated speed of 1.5m / min and a maximum of 30.5 m / min, using inert gas to prevent external contamination.	Camex Resolution	51
8514.10.10	78	steel strips with a width between 10 and 650mm, with a thickness between 0.3 and 3.5mm, austenitized, hardened to turn on and tempered carbon steel strip with maximum cross-flatness tolerance of 0.10% of the width, winding otherwise ( "coil set") of the maximum 3mm per meter, with a shiny surface level of security without surface oxidation, with a maximum variation in hardness HRC 2, variation in the tensile strength limit equal to -30N + / mm <sup>2</sup> , up to 11 strips can process simultaneously, with a maximum capacity of 1.400kg / h composed of: processing machine provided martensística austenitized tape system to define flatness with the first cooling zone and air cooling zone 5 water; leveling oven with plates heated, working temperature between 300 and 500 ° C with uniform temperature of + 5 ° C; final processing kiln to anneal the steel strip, with a process temperature between 300 and 700 ° C, temperature uniformity of + 3 ° C and definition of surface finish (shiny or blue); controlled by PLC.	Camex Resolution	51
8514.10.10	79	Horizontal ovens indirectly heated by electrical resistance to temper glass with a thickness from 3 mm with production capacity from 3 to 25 charges per hour, also developed for processing low-emissivity glasses "Low-E", ensuring ripple "Roller Wave" less than or equal to 0.2 mm, edge warping "edge Lift" less than or equal to 0.4 mm in the final product, with or without measuring system "online" in real time glass anisotropy, air circulation system, control over the temperature of the rollers, with or without detector automatic glass breaking, "software" for monitoring and control, with or without module tempera curved glass (NCM and No. Ex altered by RESOLUTION CAMEX No. 90 OF 13 OF DECEMBER 2017)	Camex Resolution	51
8514.10.10	80	thickness from 3mm to glass production capacity, "Low-E" (0.02) between 8 and 25cargas / hour production capacity for glass "clear" between 3 and 25cargas / hour, ensuring less than or equal to 0.1 mm ripple and lower edge of warping or equal to 0.2 mm glasses also "Low-E", with or without measuring system "online" and real time glass anisotropy with air recirculation system at the top of the heating module, control over the temperature of the rollers, with or without detector automatic glass breaking, "software" for monitoring and control, with or without module for tempering curved glass, with or without air recirculation system on the bottom of heating module. (NCM and No. Ex altered by CAMEX RESOLUTION No. 90 OF 13 OF DECEMBER 2017)	Camex Resolution	51
8514.30.11	3	degassing automated furnaces for the treatment of special gas cylinder with heating system, purge and vacuum capacity of 12 cylinders, electrical resistance, maximum temperature: 60 ° C, maximum pressure: 200psig, vacuum pump 15CFM, power supply 480V, 3 phase, 60Hz programmable logic controller (PLC) with screen "touchscreen."	Camex Resolution	51

8515.21.00	156	Machine combinations for resistance welding, the top of short rail track (6 120m) for conversion to long welded rails (up to 500m), consisting of: 1 machine for electric welding, resistance, maximum power welding 660kVA, regardless of the gripper device electrodes, buffing device of the welding burrs on rails, maximum strength 1.500kN fixing, adjustable blades 4 and the programmable logic controller; 1 and cooling unit, containing 400 liter tank, connected to the cooling water circuit, added with 30% ethylene glycol, and the heat exchanger hydraulic unit, with maximum pump pressure 140bar, cooling power 94.600W and maximal current 71,1A.	Camex Resolution	51
8515.31.90	3	Operating equipment pins welding, using the ignition process by remoteness and the arc of opening with one or more sources of power and command, one or more pins feeders, one or more semi-automatic welding gun or welding head machine, one or more supply hoses, connecting cables (mass cables, welding cables, control line), contact for grounding and air tubes.	Camex Resolution	51
8515.39.00	2	manually operated equipment pins welding, using the ignition process by remoteness and the arc of opening with one or more sources of power and control, with one or more manual welding guns, one or more signal converters, cable welding, earth cable and connect to ground.	Camex Resolution	51
8515.80.90	12	Machines for welding electrical capacitors with maximum production rate equal to or less 125peças / min.	Camex Resolution	51
8515.80.90	24	Machine for welding / sealing and cutting copper tubes with ultrasonic welding with welding and cutting ability tubes in the range from 2 to 12.5 mm, external diameter without the need to exchange the tools.	Camex Resolution	51
8515.80.90	91	Laser additive manufacturing machines for manufacturing metal parts in 3D from metal powder with computerized numerical control (CNC), 100mm of desktop diameter part of the height up to 100mm, thickness of the print layer of 20µm , maximum power 200W laser, print speed of 6m / s and focus diameter of less than 55µm. (Wording given by SECINT ORDINANCE No. 220 of 25 FEBRUARY 2019)	Camex Resolution	51
8515.80.90	92	electronic welding machines, by melting, for the production of PVC frames, with welding bead removal and hence without the need for cleaner machine corners, with error compensation system, provided with four heads, with a total process time variable 55-160 seconds able to compensate for errors in cut lengths of no more than 2mm and errors in the angles of horizontal / vertical cuts at most 1 degree and power 12KW.	Camex Resolution	51
8515.90.00	2	Automatic Welding tongs, direct action or indirect, with or without joint, operating electric servo actuator water-cooled or air transformer welding MFDC type (medium frequency), with or without fairing rigid protective side fixing support or robot operation. (Wording given by OCTOBER CAMEX RESOLUTION No. 81 OF 17 2017)	Camex Resolution	51
8517.62.11	1	universal data recorders used in development activities and electronic control system calibration (ECU) engine / transmission vehicle, acquisition and tracking variables by means of vehicle communication networks (CAN, ETK, and others).	Camex Resolution	50
8517.62.39	4	Interface electronic modules with thermocouples, 8-channel, measuring / acquisition of core temperature signals from electronic injection in vehicle systems.	Camex Resolution	50
8517.62.41	1	robust routers for harsh environments with support for the following protocols: IETF6LOWPAN, RPL IETF, IEEE 802.15.4g / e, IEEE 1901.2, IETF COAP, supporting in one single structure the following long-distance connection technologies through internal modules - Ethernet, Serial, WiFi, WiMAX, HSP +, UMTS, GSM, GPRS and EDGE.	Camex Resolution	50

8517.62.59	9	of Layer 7 OSI, based on comparative analysis, immediate and statistics, the traffic from DDoS attacks through traffic by default applications "backbone" of the client (TCP, HTTP, DNS , SIP and others), dedicated to integrate traffic analysis platform ( "flows") of "backbones" of the internet, non-intrusive architecture on the network, based on "hardware" with OS specific purpose ( "appliance"), with the ability to detect the type distributed denial of service anomalies (DDoS) of the BGP protocol anomalies and inbound and outbound traffic analysis.	Camex Resolution	50
8517.62.59	17	Equipment for video content distribution for TV and Internet, with a minimum capacity 1.500GB content storage; with ethernet interfaces with a minimum capacity of 1 Gbps; able to be grouped into one array operating as a single logical system.	Camex Resolution	50
8517.62.59	18	videoconferencing endpoints, telepresence technology, high definition, and may contain IP telephone, central touch control, tables, reflectors, electrical installations, microphones, speakers, codecs, screens and high-definition cameras, forming a single body or a functional unit. (Wording given by CAMEX RESOLUTION No. 31 OF 02 MAY 2018)	Camex Resolution	50
8517.62.59	22	used to convert electrical signals into optical and vice versa, suitable for use in FTTx ONT / ONU as part of an apparatus for transmitting and receiving data on passive optical networks applications ( PON) type Optical Network Unit (ONU).	Camex Resolution	50
8517.62.59	23	convert electrical signals into optical and vice versa, connector provided for optical fiber suitable for use as part of an apparatus for transmitting and receiving data on passive optical networks (PON ) like "Concentrator Subscriber Lines (OLT)."	Camex Resolution	50
8517.62.59	25	Control Protocol) Network (WAN - Wide Area Network), hardware-based with OS specific purpose ( "appliance"), with functionality to support eliminating redundant data from the long-distance network, data compression that travels on the network using the algorithm "Lempel-Ziv" (LZ), improvements in the TCP protocol and minimum storage capacity of 200GB.	Camex Resolution	50
8517.62.59	27	Electronic modules for converting electrical signals into optical and vice versa, consisting of printed circuit boards laser diode, photodiode and other electronic components, mounted, secured in plastic wrapper and provided with one or two connectors for optical fiber, suitable for integrating, welding, electrical appliances for digital line systems.	Camex Resolution	50
8517.62.59	29	interchangeable electronic modules for converting electrical signals into optical and vice versa, consisting of a printed circuit board with laser diode, photodiode and other electronic components, mounted, secured in a metal casing and provided with one or two connectors for optical fiber, suitable for integrating by fitting into the appropriate connector, electrical appliances digital communication.	Camex Resolution	50
8517.62.59	37	traffic analysis equipment (flows) of "backbones" of the Internet, non-intrusive architecture on the network, based on "hardware" with OS specific purpose ( "appliance"), with anomaly detection ability of the type denial of service distributed (DDoS) of the BGP protocol anomalies and incoming traffic analysis and output through the NetFlow analysis, SNMP and BGP routes with minimum unit capacity of 240,000 "flows" / second and ability to collect "flows" at least 32 routers.	Camex Resolution	50
8517.62.77	1	data communication modules for WLAN applications (compatible with the IEEE 802.11 standard) and / or NFC and / or "Bluetooth" and may contain radio frequency FM reception of 65MHz band to 108MHz RDS (Radio Data System), for plate mounting printed circuit SMT (Surface Mount technology), for use in portable devices mobile.	Camex Resolution	50

8517.62.91	8	high power amplifiers (HPA), the wave tube in Ka-band outdoor use, with peak power of 500W, operating at frequencies 27.0 and 31,0GHz for service "uplik" on satellite terminals, antennas type 'fly-away' and vehicle digital satellite news gathering (DSNG).	Camex Resolution	50
8517.62.94	1	process them in an MPEG digital signal distributed through QAM modulation.	Camex Resolution	50
8517.70.10	1	Printed circuit boards with audio components and / or video and / or sensing, functional card for use exclusively on mobile device mobile phone, assembled from SMT (Surface Mount Technology) using flexible plastic plate resistant reflow temperature solder paste, supported by metal mold obtained by the process of high-precision machining and cut by press molding with die cutting in a specific format.	Camex Resolution	50
8517.70.10	6	Flexible printed circuit boards mounted with connecting components and / or audio and / or vibration motor and / or interface, as well as ancillary electronic components, all suitable for mounting with SMT (Surface Mount Technology) for use exclusively in portable device mobile telephony.	Camex Resolution	50
8517.70.99	3	Accommodation front mounted display "OLED" or other technologies, and may contain diffusers, and connectors substrates, flexible printed circuit mounted device with electronic components and touchscreen (touch screen), suitable for the mobile handset.	Camex Resolution	50
8517.70.99	4	Silicone keyboards, with or without screen printing, with carbon contact, use in corded telephone, wireless phone, smart phone terminals to PBX, IP phones and phones dedicated to the porter.	Camex Resolution	50
8517.70.99	5	image capture module handsets mobile phone with optical and electronic resources for collecting, processing and forwarding of the encoded image, including integrated circuit CMOS (Complementary Metal Oxide Semiconductor) with millions of image points (pixels), and may contain or non-solid state memory for temporary storage and connection element.	Camex Resolution	50
8517.70.99	6	active matrix displays with technology of organic light-emitting diode (AMOLED - Active-Matrix Organic Light-Emitting Diode), with or without touch device and / or frame and / or connecting element for use in portable devices mobile .	Camex Resolution	50
8517.70.99	7	OLED or other technologies, and may contain mounting structures, supports, pads, protectors, connectors, engine "vibrate" image capture modules, microphones, speakers , sensors, buttons, knobs, antennas, cables, electrical contacts, viewers, lenses, LEDs, Flashes, diffusers, labels, mounting screws, adhesives, moldings, decorative covers, magnets or magnetic devices, films, sinks, fences, screens ( touchscreen) and / or touch sensitive devices and printed circuits may or may not be mounted with electronic components that implement any of the functions other than the main functions of the cellular phone. (Wording given by CAMEX RESOLUTION No. 44 OF 28 JUNE 2018)	Camex Resolution	50
8517.70.99	8	Modules assembled with LCD liquid crystal display, OLED or other technologies, electronic integrated circuit "driver", backlight and / or side, rear frame and / or side protection and flexible printed circuit board mounted with electrical components and / or electronic format and with appropriate connections for portable transceiver device mobile.	Camex Resolution	50
8517.70.99	9	Touchscreens "touchscreen" obtained from the transparent thin film technology, conductive mixed indium oxide and tin (ITO) and / or other technologies, deposited on glass or plastic substrate with operation by capacitive or resistive mode containing printed circuit board with electrical and electronic components, with specific shape and dimension for installation in portable transceiver device mobile.	Camex Resolution	50

8517.70.99	10	rear portable terminals cellular subsets, assembled with plastic and / or metal supports may contain antennas opening compartments, shims and / or shields of various materials, tape and / or labels, connectors and / or electrical contacts, viewers camera and / or flash, keys, buttons, motors "vibrate", microphones and speakers.	Camex Resolution	50
8517.70.99	11	Metal shields and for mechanical protection against electromagnetic interference or radio frequency signals, with or without adhesives or insulating, suitable for portable cellular phone terminal.	Camex Resolution	50
8528.52.10	1	exclusive use of monochrome monitors in the medical field, high-resolution 1-10 megapixels.	Camex Resolution	50
8528.52.20	1	colored exclusive use in the medical field monitors, high resolution 1-12 megapixels.	Camex Resolution	50
8530.10.10	15	Axle counters to control railways, formed by drawers (racks) cards with microprocessors, wheel sensors, devices for interconnecting, and protecting assembly that may or may not contain enclosures for mounting the drawers.	Camex Resolution	50
8530.10.90	16	between 50 and work of 500m, for the implementation of security workers in railways, warning in advance about the approach of railway trains, and may contain 1-9 devices personal ZPW alert to at most 18 updates acoustic device (siren) WGH by 10 trains detectors (sensors) F500, up to 10 calibrators F500AB sensor up to 10 ZFS transmitters until 20 wires for siren connection kWh20 , up to 10 ZDE tripods, up to 3 harness radio equipment supports, universal chargers 50 to 43 ZA24-2.9 batteries, batteries ZA24-7W to 18, up to 10 radio frames protective equipment 10 to telescoping antennas kit F500 installation of the detector, bags for up to 20 ZA24-2 batteries and at most 18 mounting brackets F500-AB, which may contain as an optional item 1 ZRC central control, to individual warning device 9 c ZIW ompletos maximum 3 over stationary antennas range and up to 3 tripods for long range antenna.	Camex Resolution	51
8532.24.10	2	electrical condensers (capacitors) multilayer, fixed, dielectric ceramic SMD (surface mount).	Camex Resolution	50
8532.24.10	3	fixed electrical capacitors with nominal voltages equal to or greater than 4V operations with multilayer ceramic dielectric, suitable for surface mounting (SMD- "Surface Mounted Device").	Camex Resolution	50
8534.00.40	1	Flexible Printed circuits, double-sided, with an insulating polymer or epoxy resin, which may contain electrical connecting elements, suitable for portable cellular phone terminal.	Camex Resolution	50
8534.00.59	1	Circuits rigid-flexible printed multilayer with an insulating polymer or epoxy resin, which may contain electrical connecting elements, suitable for portable cellular phone terminal.	Camex Resolution	50
8536.50.90	4	electromechanical devices to lock the washer door opening centrifugation clothes when in operation, consisting of embedded microswitches internal slide lock mechanism, with or without base metal or plastic mounting.	Camex Resolution	50
8536.50.90	6	electrical switches miniature mechanical type ( "Push Button") with unipolar SPST contact ( "Single Pole Single Throw" - a center and a direction) or SPDT ( "Single Pole Double Throw"), suitable for surface mount (SMD).	Camex Resolution	50
8536.90.40	4	electrical connectors for mounting on printed circuit board, the USB receptacle versions (Universal Serial Bus) or micro-USB or mini-USB, type A or B, for operations at low voltages.	Camex Resolution	50
8536.90.40	7	Connectors or sockets miniature multi-way, suitable for mounting on a printed circuit board with SMT (Surface Mount Technology).	Camex Resolution	50
8536.90.40	8	electrical connectors terminal type or coaxial contact for mounting on printed circuit board by SMT.	Camex Resolution	50



8536.90.40	9	Connectors modular type female RJ (Registered Jack), individual or groups, with or without a metal shield, with or without a LED (light emitting diode) built with 2 to 10 terminals per position, with or without an integrated USB port, suitable for mounting "thru-hole" (PTH) or "surface-mount device" (SMD) on printed circuit boards.	Camex Resolution	50
8536.90.40	10	individual or grouped connectors, with or without metal shield with the functionality to interconnect modules electrical signal converters in optical (and vice versa) on printed circuit boards, allowing for high-speed data traffic and easy connection and disconnection of converter modules with weldable or press contacts.	Camex Resolution	50
8536.90.40	11	Connectors HM type (hard metric) suitable for high-speed data signal traffic (above 2Gbit / s) and the corresponding HM connector power with greater than or equal power 1A, with or without a metal shield, from 10 to 200 positions contacts, suitable for mounting on board hole (PTH) or by pressing (press fit) on printed circuit boards.	Camex Resolution	50
8536.90.40	12	assembly straight or 90 ° angle, individually or grouped with contacts for signal or power, typically used in computer and telecommunications equipment.	Camex Resolution	50
8536.90.40	13	Connector sockets for memory sticks connection DRAM DIMM (Dual Inline Memory Module, Memory Module Dual Line), for surface mounting (SMD) or holes (PTH) of a printed circuit board typically used in equipment and telecommunications.	Camex Resolution	50
8536.90.40	15	Connectors miniature electric sockets for printed circuit board, with copper alloy contacts with nickel finish or gold and minimum durability of 3,000 cycles, fit for assembly by PTH technology (Pin Through Hole) and / or SMT (Surface Mount Technology) .	Camex Resolution	50
8541.60.10	1	surface mount (SMD) frequency greater than or equal to 1MHz, but less than or equal to 100MHz. (Composition given by Resolution 10 ON 30 JANUARY 2020)	Camex Resolution	50
8541.60.90	2	RF signal filters with piezoelectric crystals, mounted, suitable for surface mounting (SMD), obtained from the SAW technology (Surface Acoustic Wave), BAW (Bulk Acoustic Wave) or FBAR (Film Bulk Acoustic Resonator), alone or in any combination of these technologies, for applications such as duplexers, bandpass filters or other.	Camex Resolution	50
8541.60.90	3	Resonators quartz oscillator or piezoelectric crystal, mounted, miniature type, nominal frequency less than 1 MHz, suitable for surface mounting by (SMD- Surface Mount Device).	Camex Resolution	50
8541.60.90	4	Resonators or oscillators or ceramic piezoelectric crystal of quartz, mounted miniature type, nominal frequency less than 1 MHz or higher to 100 MHz, suitable for surface mounting by (SMD- Surface Mount Device).	Camex Resolution	50
8541.60.90	5	miniature type, suitable for a surface mount (SMD) with or without temperature compensation (TCXO), with or without control voltage (VCXO).	Camex Resolution	50
8542.33.19	1	electronic integrated circuit amplifiers, hybrid thick film technology, suitable for assembly by SMT (Surface Mount Technology).	Camex Resolution	50
8542.39.19	3	electronic integrated circuits, hybrids obtained with thick film technology, suitable for assembly by SMT (Surface Mount Technology).	Camex Resolution	50

8543.70.99	122	Electrical apparatus for generating electromagnetic waves which order the flow of electrons without voltage variation, coupled in parallel to power systems with any characteristics fed in alternating current with a smaller or equal voltage 600V without limitation apparent power, with a consequent reduction losses in the systems derived from "Joule" and optimization of electric current, consisting of: copper cables for coupling to electrical systems, consisting mass, ceramic plates, electrolytic copper bar and insulating plates, these components sealed in a metal housing.	Camex Resolution	50
8544.70.90	2	Fiber optic cables provided with FBG type sensors (fiber Bragg grating), with 4.3mm diameter cable, cable length up to 180m, operating temperature of -50 to 75 ° C, fiber diameter (internal / sternum) 9 / 125µm, type "single mode", armor protection with external polyurethane coating for UV protection, immune to electromagnetic interference and radio waves, intended for installation in systems for intrusion detection in perimeter.	Camex Resolution	50
8602.10.00	4	diesel-electric locomotives of 6 axles, with maximum gross output exceeding 5.200HP.	Camex Resolution	51
8604.00.90	33	regulatory machinery for distributing ballast and railway lines races, with diesel engine water cooled, 730mm diameter wheel.	Camex Resolution	51
8604.00.90	53	Rail cranes, self-propelled rail, driven by water-cooled diesel engine, with a rail gauge of 1,600mm, telescopic lance (retractable) with operating range from 8 to 20m and lifting capacity, supported, up to 225T.	Camex Resolution	51
8604.00.90	59	ballast regulators and distribution equipment for railways equipped with water-cooled diesel engine, power equal to or greater than 403kW wheel with a diameter of 920mm, central plows and hydraulically adjustable side rail gauge and 1.600mm.	Camex Resolution	51
8604.00.90	60	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 429kW, 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 1,000mm circulation equal to 80km / h.	Camex Resolution	51
8604.00.90	61	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 653kW, 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 3 dormant for moving tamping system with pressure vibration with 35Hz frequency and directional, linear oscillation gauge railway and speed of 1,600mm circulation equal to 100km / h.	Camex Resolution	51

8605.00.10	1	<p>incorporation into passenger train composition pulled by diesel-electric locomotives with minimal tractor 37.000kgf continuous effort and 59.000kgf least at the time of rush for greater distance routes to 1,000 km, designed to travel exclusively on railways of the "heavy haul" (heavy load) used for rail traffic combined with ore cars and other cargo and can support side of 80km / h in the curve with maximum 100mm super-elevation winds all passenger car on the same side, built in steel structure with a high copper content, maximum length of 24m between couplers width 2,824m to 3,100m or meter gauge to wide gauge, height 4.4m, maximum center of gravity 1.83m to metric or 2,49m gauge to wide gauge, thermal acoustic flame retardant coating, closed connection between drive system with "gang way" (accordion) 2 PO boarding RTAS and automatic landing and drive lock faster than 5km / h antisquash system, presence sensor, indicator and audible alarm door drive and the last rung of the ladder automatically open the door opening and closed lamp the door lock enabled command performed</p>	Camex Resolution	51
8605.00.10	2	<p>incorporation into passenger train composition pulled by diesel-electric locomotives with minimal effort tractor 37.000kgf continuous and 59.000kgf least at the time of rush for greater distance routes to 1,000 km, which is designed to travel only in railways type "heavy haul" (heavy load) used for rail traffic combined with ore cars and other loads can withstand crosswind 80km / h with a maximum in the curve superelevation with 100mm all passengers on the same side of the car, with installation of lifts on both sides for access by people with wheelchairs, clinic and service center can control monitor all cars (wagons) of the entire train, built in structure steel with high copper content, maximum length of 24m between couplings, width of 2,824m to 3,100m or meter gauge to gauge her RGA height of 4.4m, maximum center of gravity for measuring 1.83m or 2,49m gauge to wide gauge, thermal acoustic flame retardant coating, closed connection between drive system with "gang way" (accordion) 2 boarding gates and automatic landing and drive lock faster than 5km / h antisquash</p>	Camex Resolution	51
8605.00.90	3	<p>incorporation into train composition pulled by diesel-electric locomotives with minimal tractor 37.000kgf continuous effort and 59.000kgf least in time to rush to the greater distance of 1,000km route, designed to travel exclusively on railways of the "heavy haul" (heavy load) used for rail traffic combined with ore cars and other cargo and can withstand side winds of 80km / h in the curve with maximum 100mm superelevation with all passengers in same side of the car, with structural design capable of supporting the wiring of cooking equipment for food preparation, structure constructed of steel with a high copper content, maximum length of 24m between couplers 2,824m width or gauge for measuring 3 , 1m wide gauge, height 4.4m, maximum center of gravity for measuring 1.83m or 2,49m gauge to wide gauge, coated thermal acoustic ment flame retardant, interconnection between closed car with system "gang way" (accordion) 2 boarding gates and automatic landing and drive lock for speed higher than 5km / h antisquash system, presence sensor, indicator lamp and movement</p>	Camex Resolution	51

8605.00.90	4	incorporation in train composition pulled by diesel-electric locomotives with minimal tractor 37.000kgf continuous effort and 59.000kgf least in time to rush to the greater distance of 1,000km route, designed to travel exclusively on railways of the "heavy haul" (heavy load) used for rail traffic combined with ore cars and other cargo and can withstand side winds of 80km / h in the curve with maximum 100mm superelevation with all passengers in same side of the car, built in steel structure with a high copper content, maximum length of 24m between couplers for measuring 2,824m width or 3.1M gauge to wide gauge, height 4.4m, maximum center of gravity 1 , or 83m to meter gauge to wide gauge 2,49m acoustic insulated flame retardant, closed connection between drive system with "gang way" (accordion) 2 ports Boarding ue and automatic landing and drive lock faster than 5km / h antisquash system, presence sensor, indicator light and audible alarm door drive and last step of automatically steps in opening the door and closed on the lock of port enabled by remotely performed command any car equipped	Camex Resolution	51
8605.00.90	5	passenger train pulled by diesel-electric locomotive with minimal tractor 37.000kgf continuous effort and 59.000kgf least in time to rush to the greater distance of 1,000km route, with compartment luggage storage, designed to travel only in the type "heavy haul" railways (heavy load) used for rail traffic combined with ore cars and other loads can withstand crosswind 80km / h in the curve with a maximum of 100mm superelevation with all baggage on the same side of the car, made of steel structure with high copper content, maximum length of 24m between couplers, 3,10m width, height 4.4m, maximum center of gravity 2,49m, coating flameproof acoustic thermal interconnection between drive system with closed "gang way" (accordion) equipped with electro-pneumatic brake type "overlay" as S-4200 and AAR standard disk Brake system with ( "Wheel Slide Protection") wheel antilock trick provided with primary and secondary suspension via springs and dampers, with bearing axles cartridge type 51/2 "x 10" wheel 33 "forged disc-shaped low voltage "S" as AAR standard M-	Camex Resolution	51
8605.00.90	6	pulled by diesel-electric locomotives with minimal tractor 37.000kgf continuous effort and 59.000kgf least in time to rush to the greater distance of 1,000km route, designed to travel only in railways type "heavy haul" (heavy load) used for rail traffic combined with ore cars and other loads can support side of 80km / h with a maximum in the curve superelevation 100mm winds groups containing 2 1.000kVA three phase electric generators, voltage of 380V and 60Hz frequency, power factor of 0.8, diesel engine with 1.800rpm and can operate at altitudes from 0 to 1,200 meters with an operating autonomy and 40h interconnected with automatic control and diagnostic system, diesel tank capacity not exceeding 8,000 liters with indicator and interconnected with the control system, built in steel structure with high copper content, comprimen to a maximum of 24m between couplers for measuring 2,824m width or 3.1M gauge to wide gauge, height 4.4m, maximum center of gravity for measuring 1.83m or 2,49m gauge to wide gauge, thermal acoustic coating flameproof, interconnection between	Camex Resolution	51
8608.00.12	8	electromechanical devices for control of railroad train routes (key machines) driven from an electrical signal.	Camex Resolution	51

8608.00.90	10	radio signal reception and power to the trains, switches and equipment APS, side protection ( "straight rail APS," "rods APS" "APS in railroad switch", "Fishplates"), electrical boxes installed along the route to switching of 750V to 0V securely ( "feed box", "end line box"), cables and connectors for the power system and the communication between equipment ( "antenna cable", "measuring" cable "multifuncionaol-MFC" cable "power connectors"), which may or may not contain localized offices in the substation to monitor and provide electricity for the equipment installed along the track ( "APS office") and may or may not contain equipment on board the train for receiving the drive chain between different power modes and radio signal transmission ( "current collector retractable "" cubicle maneuver shoes " , "The main switching box").	Camex Resolution	51
8608.00.90	24	defect detection system on wheels, load distribution and dynamic weighing of rail vehicles based on optical sensors attached to the rail, consisting of 19 "rack computer, electronic components, optical fiber cables and optical sensors for installation in railway.	Camex Resolution	51
8608.00.90	25	low temperature sensing devices in the brake discs and wheels of railway vehicles, equipped with infrared scanners with 8 channels installed in hollow sleeper on the track (Cold Wheel Detection - CWD).	Camex Resolution	51
8608.00.90	26	detection of high temperatures in the brakes of devices wheels and discs of railway vehicles, equipped with infrared scanners with 8 channels installed in hollow sleeper on the track (Hot Wheel Detection - HWD).	Camex Resolution	51
8608.00.90	27	detection apparatus of high temperatures in railway wheel bearings and bearings for rail vehicles, equipped with infrared scanners with 8 channels installed in hollow sleeper on the track (Hot Box Detection - HBD).	Camex Resolution	51
8701.30.00	1	skidders type "feller buncher," crawler used for logging, with engine power up to 200HP, with hydraulically operated crane for head support "feller".	Camex Resolution	51
8701.30.00	4	type "harvester" with maximum driving speed of 3.2km / h, power of 159HP motor 1.900rpm with maximum range of the boom 8, 9m, maximum depth of 4,77m, maximum height of 10,01m and minimum turning radius of 3,22m.	Camex Resolution	51
8701.30.00	12	Rubber crawler tractors driven by diesel engine with a gross power greater than or equal 320HP, maximum transport speed of 40km / h, with or without rear 3-point hitch with a capacity higher elevation to 7.000kg. (Composition given by CAMEX RESOLUTION No. 73 OF 05 OF 2018 Outubro)	Camex Resolution	51
8701.95.90	2	Agricultural tractor with central articulation, diesel engine provided with power equal to or greater than 370HP and tensile 4 x 4 (Composition given by CAMEX RESOLUTION No. 81 OF 17 OCTOBER 2017)	Camex Resolution	51
8701.95.90	3	articulated forest tractors on wheels for wood logs nearby transport, with or without auxiliary winch traction, with load capacity less than 15t with traction 4 x 6 or higher, with maximum range of crane less than 7.5m and hydraulic claw maximum displacement speed lower than 25 km / h, engine power exceeding 210hp with two hydrostatic transmission speeds, technically known as "forwarder".	Camex Resolution	51
8701.95.90	5	skidders type "feller buncher" on wheels, with articulated chassis, used for logging, with engine gross power less than 175hp, but equal to or less than 300HP, equipped with head "feller" cutting capacity of 49 the 59cm and accumulation capacity of 0,47 to 0,66m2.	Camex Resolution	51
8704.10.90	14	Trucks "dump" designed to be used off-road, understood nominal payload capacity of 40 to 70 metric tons.	Camex Resolution	51

8704.10.90	16	"Dumpers" relegated to underground mines, with articulated chassis, traction 4 x 4, on wheels, load capacity less than or equal to 32.65 tons, with a maximum width equal to or less than 3.100mm, cabin height or less 2.740mm, bucket height 2.595mm or less.	Camex Resolution	51
8704.10.90	24	Dumper lowered for underground mining, with a hinged chassis 4 x 4 traction on wheels, load capacity equal to or less than 60 tons, with a length equal to or less than 3500mm, cabin height not exceeding 2.900mm, height bucket 3500mm or less.	Camex Resolution	51
8704.10.90	30	middle, 4 x 4 traction on wheels, the power 589HP engine 22.9m3 bucket with ejector, a maximum width not exceeding 3.200mm, cabin height not exceeding 2.817 mm.	Camex Resolution	51
8704.10.90	31	Trucks lowered for underground mines with articulated frame near the middle, 4 x 4 traction on wheels, engine power 776 / 805HP, 26.9 to 29.4m3 bucket with ejector, a maximum width not exceeding 3.560mm, the same cabin altitude or less than 3.000mm (with ejector).	Camex Resolution	51
8704.10.90	42	off-road trucks with operating weight of 43.100kg, gross power of 551kW at 2,000rpm engine, fully automatic transmission with seven speeds forward and one aft.	Camex Resolution	51
8709.11.00	8	Vehicles self-propelled tugs, equipped with shock absorbers on wheels for operation outdoors, driven by AC traction electric motor (AC) of 23KW, battery powered 80V, power steering, ability to pull trailers up to 25.000kg, speed displacement with / without load 10 and 26km / h respectively.	Camex Resolution	51
8709.11.00	13	Movers vehicles like "ride-on" Battery-operated, to move cars inside the factory, such as chassis dynamometer with maximum load capacity per drive shaft 1.800kg, with a maximum weight of 3.430kg traction, maximum speed operation 6km / h.	Camex Resolution	51
8905.90.00	10	and four corners and two removable walls pontoon 1, with the following characteristics: pontoon block extension length of 320m; Fixed length of the side wall 45m; removable side wall length of 150m; width between the outer side walls of 90m; width between the inner side walls of 70m; width between the inner side walls of the fenders 67m; width of the side wall (side wall includes removable) 10m; depth of the upper deck of the side wall 26m; pontoon depth of 6.8 m from the centerline; pontoon depth of 6.5m outer sidewall; height 1.80 m keel block; projection for lifting / freeboard of 6.2m / 0.30m; soaking capacity of 19,5m; up projection keel blocks 10,9m; Maximum gauge projection 20,5m; pontoon deck of curvature of 0.3m; curvature to the upper deck of 0.05m; maximum lifting capacity of 85,000 metric tons with free edge; 2 with the main motor assemblies 1.628kW / 440V, 60Hz for power generation; System discontinuous current 24V starter motor; equipment salvage; signaling equipment; collision equipment; fenders; anchoring system; central control room; Remote measurement of	Camex Resolution	51
9007.20.90	1	digital film projectors with digital processing unit dedicated and definition less than 2,048 x 1.080pixels.	Camex Resolution	51

9011.80.90	6	provided with: Motorized variable lens system with working distance between 200 and 415mm without changing lenses, field diaphragm for better detail view, electromagnetic lock on all axes; control working distance, zoom and light intensity through "joystick" multifunctional; It contains tiltable binocular tube from 0 to 180 degrees, and 12.5x ocular 10x, wide-angle diopter adjustment between -8 and 5dpt; integrated optical fiber for illumination with xenon lamp of 180W lamp and integrated backup 180W xenon; It contains external digital hour meter for viewing the life of lamps, pipe for secondary co-observation allowing a lateral wear and face to face with tilting and rotating 360 degrees in 3 axes, image rotating binocular straight tube and 10x eyepieces or 12.5x rays splitter (optical split) 50%; may optional contain as camcorder, video recorder, footswitch, unlocking movement control per nozzle command soil the stand with swivel arm counterbalanced and spin column 320 degrees around its axis, integrated video monitor in the stand, stereo image splitter face to face, among others.	Camex Resolution	51
9013.20.00	15	Units lasers, solid state diode pumped, the synthetic crystal base (disc-shape), which are excited by light of high power LED, with the wavelength of 1.030nm, output power of between 200 and 16.000W, comprising: resonator computer with dedicated software command with or without refrigeration unit suitable for use in sheet metal processing such as cutting, welding or deposition of laser material.	Camex Resolution	51
9014.80.10	13	Multibeam echosounders high resolution bandwidth with 1x1 degrees beamwidth to frequency of 400kHz, the maximum emission rate of 50Hz and 48V supply voltage; provided: 1 transmitter transducer and one receiver integrated with operating frequency of 400kHz to 200, reaching a maximum depth of 600m; 1 processing unit with a supply voltage of 100 / 240VAC and one operating station with display data for presentation.	Camex Resolution	51
9015.20.10	3	Theodolites electronics, with EDM incorporated electronic type (total station), vertical axis compensator, minimum angle reading accuracy of 10 arc seconds, measurement accuracy of distance with or without reflector, reach with one prism less than 3,000 I incorporated internal memory for storage of data collected.	Camex Resolution	51
9015.20.10	4	station", vertical axis compensator, precision minimum angle reading of 10 seconds of arc and incorporated internal memory for storage of data collected.	Camex Resolution	51
9015.20.10	6	Theodolites electronics, with EDM incorporated electronic, such as "total station", with vertical axis compensator, minimum angle reading accuracy of 5 arc seconds, with servomotors for target tracking, horizontal rotation speed greater than or equal to 115 degrees per second , rotation system for electromagnetic drive with data collector for control of equipment and storage of information collected.	Camex Resolution	51
9015.20.10	7	electronics, with EDM incorporated electronic theodolites, type "Total station imagiamento / scan" with vertical axis compensator, minimum angle reading accuracy of 5 arc seconds, measurement distance of 1 to 800m, scan mode measurement of 1 up to 600m, rotation system for electromagnetic drive, servo motors for target tracking, imagiamento capacity with three internal cameras with resolution (chip) less than 5MP per camera, capacity expansion of 84x, built-in camera in the optical plummet, capacity scanning 26,6kHz or higher, computer / data collector for control of equipment and storage of information collected.	Camex Resolution	51

9018.12.90	13	cardiac diagnostic system which processes, records and stores information on the reservation flow Fractional (FFR) captured by a guide with pressure and temperature sensor in the distal tip of interfaced with wired or wireless (wireless) also providing data about the pressure systolic, diastolic, mean arterial pressure and heart rate, comprising monitor with touch screen, portable and computerized interface module "wireless" remote control and dedicated program.	Camex Resolution	51
9018.19.80	35	Generators for thermal fusion of arteries, veins and visceral structures, based on platform with read impedance of tissue 25 million times per second, with control system and setting via "Wireless", touch screen, pre-programmed settings for various procedures surgical, with autoclavable pedal.	Camex Resolution	51
9018.19.80	36	electroencephalography (EEG) processed by 4 channels used in intraoperative or intensive care, displaying the status of the electrode, the waveforms of EEG spectral matrix density (DSA) known as a spectrogram, trend graphs, patient state index (PSI), electromyography trend (EMG), artifacts (ARTF), suppression rate (SR) provided by interface display, parameter processing module, signal transfer cable 6 and EEG sensor electrodes.	Camex Resolution	51
9018.19.80	37	Disposable sensors electroencephalography (EEG) for direct application to the skin, non-invasive, allows the recording of signals provided by electrophysical gel electrodes 6, 4 active channels, one channel and one reference channel earth.	Camex Resolution	51
9018.19.90	3	oximetry modules capable of providing readings plethysmography curve, pulse amplitude (BLIP), the saturation value in% and heart rate value, with response time configuration, intelligent technology alarm management to avoid fatigue alarms reading technology at low perfusion and anti-motion warning messages to interference and sensor placement, sensor indication disconnected from the equipment and the patient, with event storage capacity in the sensor itself, enhancement technology of measuring saturation through the synchronization with the ECG.	Camex Resolution	51
9018.20.90	3	Apparatus laser system 810nm with a maximum creep 100Joules / cm <sup>2</sup> with cooled and interchangeable sapphire lenses, with pulses lasting between 5 and 300 milliseconds, and repetition rates of up to 3Hz, for dermatological treatment of vascular or pigmented lesions, pseudofolliculitis barbae, and permanent reduction of hair.	Camex Resolution	51
9018.20.90	6	1.540nm with pulses of 10 to 15ms duration, with maximum energy 70milijoules / microfeixe and intense light pulses with 1 to 100 ms in duration, with fluency maximum 80J / cm <sup>2</sup> with wavelength dual band of 500 to 670nm and 870 to 1.200nm, for treating stretch marks, melasma, vascular lesions and pigmented benign telangiectasia, rosacea, port wine stains, hemangiomas and angiomas .	Camex Resolution	51
9018.20.90	10	Equipment for digital image projection of the vascular system, directly to the skin surface through next light to infrared allowing peripheral viewing detailed veins, calibrate assessment, path and permeability up to 10mm depth focusing identifier; 100-240VAC power or internal lithium battery.	Camex Resolution	51
9018.20.90	11	Apparatus system with laser wavelength of 1.064 or 532nm, with two kinds of laser pulses in the same machine, with pulse width of 750 ps (x10-12) and 2 nanoseconds (x10-9) operating frequency single pulse of 1 to 10 Hz; handpiece with a diameter of 2 to 8mm; energy to 300mJ maximum length of 532nm and fluence 2,5J / cm <sup>2</sup> ; 600MJ to 1.064nm length and maximum fluence 10 J / cm <sup>2</sup> ; equipped with an articulated arm diode sighting pen 635nm, for treating pigmented lesions and removal of tattoos.	Camex Resolution	51
9018.50.90	6	Devices for measuring accuracy and visual screening for the examination of visual performance parameters.	Camex Resolution	51



9018.50.90	16	Devices for ophthalmic surgery of the retina and vitreous body.	Camex Resolution	51
9018.50.90	31	distance meters monocular or bi for all distances ranging between infinity and 35 cm; digital readout of the distance mono- and binocular 48 to 77mm, ranging from 0.5 to 0.5 mm; lighting and automatic digital fixation.	Camex Resolution	51
9018.50.90	52	posterior capsulotomy, peripheral iridotomy and trabectomia; with fully-ray laser source integrated with halogen laser slit lamp with adjustable slot height in steps of 1, 3, 5, 9 and 14mm and width of adjustable slit 0 to 14mm, modal laser with a wavelength of 1,064 nm and pulse duration of less than 4th, focus diameter 10µm in air; Target beam with a wavelength of 660nm to 680nm with a maximum power of 150µW and 4 points of focus; 5x magnification adjustable in steps, 8x, 12x, 20x and 32x in magnification 10x ocular tube 140mm, parallel tube display 140mm and adjust the pupillary distance of 55 to 78mm; with bearing arm, and fixing lamp flashing red LED.	Camex Resolution	51
9018.50.90	53	computerized Campímetros for functional tests of identification, measurement and monitoring of visual field loss of the eye, with maximum intensity stimulus 10.000ASB and duration of 200 milliseconds and can be expanded to 500 milliseconds for testing "Esterman" or be continuous for kinetic tests ; systems with progression analysis and tests guided fovea testing, among others; with test distance of 30cm field of view and the lighting dome cavity or equal to 31,5ASB; with maximum time interval 89-90 degrees and dynamic range equal to 50db; computer operating system installed and internal storage, with 5 to 6 USB 2.0 ports type A and type Ethernet gateway "software" for use of liquid test lens; may or may not contain the display, "mouse", keyboard and instrument table.	Camex Resolution	51
9018.50.90	54	Photo-coagulating for retinal photo-coagulation procedures, trabeculoplasty and iridotomy for the treatment of glaucoma, endowed with: green laser with double frequency and 4 types of trigger cascading, with a wavelength of 532nm with laser slit lamp , diameter continuously adjustable point of 50 to 1.000µm with maximum power of 1.5W and 3W on the cornea in the resonator and servo-electric micromanipulator, with driving distance coaxial laser illumination slit, adjustable in steps of magnification 5x, 8x, 12x, 20x and 32x and adjustable autopulso system 100 to 6.000ms pulse intervals and pulse duration of 10 to 2.500ms for unit pulse with diode 635ms to aim and focus; attached protective filter for the operator footswitch sounder, thermoelectric cooling system, a 10x eyepiece, armrest height adjustment and rod fixation light table instruments and adapter diagnostic slit lamp conversion laser workstations, desktop stand and protective cover.	Camex Resolution	51
9018.90.10	1	microprocessor devices for extraction, circulation, separation and collection of blood components, streaming and closed system with ability to perform procedures with double puncture and automatically anticoagulant administered in accordance with parameters individually for each donor or patient, continuous flow access / maximum blood return less than 130ml per minute, with or without control and information leukoreduction process "online" and mobile control panel.	Camex Resolution	51
9018.90.10	6	Equipment for extraction, circulation, automatic separation and collection and simultaneous multiple blood components, computerized, with control of the "touchscreen", the automatic functions for transfusion service.	Camex Resolution	51
9018.90.10	25	separating the blood components erythrocyte concentrates, fresh frozen plasma and platelets Intermediate, completely automatically in a single spin cycle.	Camex Resolution	51
9018.90.40	1	artificial kidneys transmembrane controlling blood detector, volume control of ultrafiltration, ultrafiltration single function modules and variable sodium.	Camex Resolution	51

9019.10.00	1	Muscular electrostimulation equipment, comprising: central supporting / pedestal fitted with tactile screen ( "touch screen") with at least 10 and at most 16 independent channels for stimulating muscle groups; connecting wires and cables; pen drive with software; with training suits fitted vests, pants, underwear (leotard), clamps, shoulder pads, with electrodes to full-body stimulation ( "full body"); hangers supporting the costumes; spray of water; with or without preparation of the support garments.	Camex Resolution	51
9019.10.00	3	19V, endowed with: "display" without touch screen with 10 dimmers channels, main knob, with power supply from 100 to 240V, frequency adjustment 2 to 10Hz at intervals of 0.5; 10 to 150Hz at intervals of 1.0Hz, the maximum amplitude of the output voltage 160V and setting maximum pulse width of 400µs.	Camex Resolution	51
9019.20.10	1	Oxygen concentrators for use in home medicine.	Camex Resolution	51
9019.20.10	16	contamination equipment, recommended for tidal volumes between 150 - 300 and 1.000ml - 1.200ml, provided with an internal structure of polypropylene fibers electrostatic or hydrophobic ceramizado paper, dead space 26, or 80ml with flow resistance of 1.6 cm 2.0 cm H2O or H2O at 60 L / min.	Camex Resolution	51
9019.20.90	3	Continuous flow generator for the respiratory airways.	Camex Resolution	51
9022.14.19	1	Mobile apparatus for imaging by X-rays in surgical procedures, comprising movable arc "C" pivoting; island; generator X-ray 60kHz, rotating anode, an image intensifier, a display device, computer and input units data, may contain, alternatively or cumulatively, thermal printer, laser pointer, remote control, skin spacer, video distributor for external DVI output, filter, grille, dual or single pedal, DVD burning drive.	Camex Resolution	51
9022.14.19	3	Mobile apparatus for imaging by X-ray surgical procedures, dismantled or assembled, comprising movable arc "C"; console; X-ray generator 40kHz; stationary anode; image intensifier 9 "; display device, computer and data entry units, and may contain, alternatively or cumulatively, thermal printer, laser sights, skin spacer, video distributor for external DVI video output, filter, grid, pedal double or single, DVD burning drive and LCD screen 19 ".	Camex Resolution	51
9022.14.19	4	Mobile apparatus for imaging by X-rays in surgical procedures, comprising movable arc "C"; X-ray generator 20 kHz; stationary anode; image intensifier 9 "; display device, computer and data entry units, and may contain, alternatively or cumulatively, one or two monitors, thermal printer, laser sights, skin spacer, video distributor for external DVI output filter , grille, pedal, DVD burning drive and LCD screen 19 ".	Camex Resolution	51
9022.14.19	6	assembled, comprising movable arc "C"; console; X-ray generator of 12.8W; stationary anode; CMOS flat detector 5 "; display device; computer and data entry units; may contain, alternatively or cumulatively, thermal printer, laser sights, skin spacer, video distributor for external DVI video output, filter, grille, dual or single pedal, DVD burning drive and LCD screen 19 ".	Camex Resolution	51
9022.14.19	7	surgical procedures, equipped with: mobile arc "C" with rotation capacity +180 to -180 °; enhancer 9 inches or more pictures; X-ray tank; collimator diameter of the minimum beam at the entrance window of less than 5cm; X-ray generator with 40kHz frequency and operating voltage to the X-ray tube 40 to 110kV, manual switch; Preview mobile station with operating power to drive a hard floor less than 90N; tests monitor; reference monitor; with or without printer. (Wording given by OCTOBER CAMEX RESOLUTION No. 81 OF 17 2017)	Camex Resolution	51

9022.29.90	7	elementary real-time materials analyzers moved on conveyor belt based on PGNAA technology (Gamma Prompt Neutron Activation Analysis) or PFTNA (Pulsed Fast Thermal Neutron Analysis), with ability to use as sources of neutrons isotope of Californium 252 or 1 electric generator neutron, it is possible to switch between the two technologies generating neutron sources preserving the other components of the same analyzer, combined with Rpp4 processing technology (Random Pulse processing) and the automated clearing software load on the conveyor belt (ABL C ), optional software for calibration based on the results of analyzes by X-rays and with the use of NaI detectors (crystal of sodium iodide) to obtain the chemical composition of the analyzed material.	Camex Resolution	51
9022.29.90	8	PGNAA technology (Prompt Gamma Neutron Activation Analysis), using as sources of neutrons, the isotope of Californium 252, combined with the RPP processing technology (Random Pulse Processing) and the using NaI detectors (crystal of sodium iodide) to obtain the chemical composition of the analyzed material, with varying load compensation feature in the belt automatically using software.	Camex Resolution	51
9022.90.11	2	inspection system volumes by X-rays, with power supply between 180 and 400VAC, maximum output power of 640 to 7.500W nominal output voltage from 5 to 450kV, rated output current from 0 to 300mA, analog communication interface, ethernet, RS232 or RS422, with or without control module.	Camex Resolution	51
9022.90.12	1	phosphor plates designed to absorb electromagnetic wave energy emitted by radiological equipment.	Camex Resolution	51
9022.90.90	1	Laser printers for photo-thermal technology films for diagnostic images designed specifically for printing dry film and used in medical diagnostic devices.	Camex Resolution	51
9022.90.90	2	carbon fiber trays used in mammography equipment, made of epoxy resin and polyacrylonitrile, low absorption translucent material, dispersion and distortion of the X-rays, allowing higher image quality and lower exposure of patients and operators. Highly durable and lightweight, designed to work as a chassis door system 18 x 24cm and 24 x 30cm.	Camex Resolution	51
9022.90.90	3	manual radiological collimators for coupling in X-ray equipment up to 150kV, with lamp to simulate the radiated field.	Camex Resolution	51
9022.90.90	6	Panel detectors plans with amorphous silicon sensor, 14-bit, 40 to 150kV, suitable for direct digital radiography equipment.	Camex Resolution	51
9022.90.90	10	Detectors for digital radiology system (DR) with amorphous silicon sensor 14bits or higher, with or without batteries and battery chargers, called Plan detector (FPD).	Camex Resolution	51
9022.90.90	11	Systems for digital radiography (DR) for adjustment in fixed X-ray machines or furniture, comprising detector amorphous silicon sensor, with or without batteries and battery chargers, operator console formed by the monitor and automatic data processing or simply "tablet" and "software" specific to patient identification, processing, storing and sending of images, with depth of 14bits or higher, digital routers, with cables and interface with or without triggers cables X-ray presented with or without carrying case.	Camex Resolution	51
9022.90.90	28	data acquisition modules for X-ray detection systems, endowed by printed circuit board and electronic components for reading and processing of data from the detector X-ray module with USB communication interfaces, Ethernet, fiber optic, frame "grabber", or RS485 interface camera link, between 2:05 channels with between 4,9V power supply and 30VDC or 110VAC at 50Hz and 240VAC at 60Hz.	Camex Resolution	51

9022.90.90	29	"Betatron" for fixed and mobile systems non-intrusive inspection of cargo, with power supply between 110 and 380VAC nominal power between 2 and 9Mev endowed of: cooling radiator, power supply, pulse converter and interface unit.	Camex Resolution	51
9024.80.90	33	non-destructive testing equipment for simulating surgical procedure and measurement of the penetration strength in a range of 0 to 1,000 g using curved surgical needles, needle diameter range between 0,152 and 1,778mm, capacity of 12 needles per cycle tray 30 needle penetrations nominal speed 15agulhas / hour.	Camex Resolution	51
9024.80.90	34	Torque rheometers for rheological characterization of polymer materials as a function of temperature and shear rate, with a power of 7kW and maximum torque of 300 Nm, endowed sensor for measuring torque up to 400nm with a resolution of $\pm 0.1$ nm and mixing chamber heated by electric resistances and maximum working temperature up to 400 ° C.	Camex Resolution	51
9027.10.00	52	carbonic gas content meter (CO <sub>2</sub> ) by calculating the entropy optional for measuring oxygen (O <sub>2</sub> ) for optical measurement, dissolved in beer, beverages in general, fixed for in-line measurements with recording capacity of 500 measurements, range measuring from 2.0 to 10.0 g / l (CO <sub>2</sub> ) and 0 to 2.000ppb (O <sub>2</sub> - optional) with normal operating accessories.	Camex Resolution	51
9027.10.00	59	optical oxygen concentration meter dissolved in beer and beverages in general, fixed and / or portable for on-line measurements with recording capacity $\leq 500$ measurements (fixed meters) and / or $\leq 400$ measurements (portable meters), range measurement of 0 to 2.000ppb (beer and beverages in general) with normal operating accessories.	Camex Resolution	51
9027.10.00	60	oxygen content measuring devices dissolved (OD) and carbon dioxide dissolved in beer and beverages in general, fixed for laboratory measurements or pre-bottled with recording capacity $\leq 250$ measurements, measuring range: 0, 00 to 4.18% (O <sub>2</sub> ) 0.000 to 2,000mg / l (OD) and 2.0 to 15.0g / l (CO <sub>2</sub> ) with normal operating accessories.	Camex Resolution	51
9027.10.00	106	precision equipment and configurable performance for individual analysis or O <sub>2</sub> gases simultaneously through the methodologies of zirconia and paramagnetic oxide; CO, CO <sub>2</sub> and / or CH <sub>4</sub> infrared GFX (Gas Filter Correlation) or SBSW (pulsed); and / or N <sub>2</sub> O infrared SBSW (pulsed) for installation in safe areas; Communication 4 to 20 mA and MODBUS.	Camex Resolution	51
9027.10.00	107	soot concentration meters exhaust gas diluted in the dilution ratio DR = 20, measured in the range of 0.001 to 50 mg / m <sup>3</sup> Exhaust gas temperature to 1,000 ° C, exhaust gas backpressure to 2.000Mbar, equipped with : measuring unit concentration soot, exhaust gas conditioning unit, CAN network cable connections unit for pressure reduction sampling probe with integrated temperature sensor.	Camex Resolution	51
9027.10.00	108	soot concentration meters exhaust gas diluted in the dilution ratio DR = 20, measured in the range of 0.001 to 50 mg / m <sup>3</sup> Exhaust gas temperature to 1,000 ° C, exhaust gas backpressure to 2.000Mbar, equipped with : measuring unit soot concentration, dilution and heated cell line 2m, multi probes holes cart to transport cable for signal transfer pipe for compressed air, particulate filter to filter probes and temperature sensors.	Camex Resolution	51
9027.10.00	109	Particle counters for measuring the concentration of non-volatile particles from the exhaust gas, capable of measuring particle sizes of 23nm (nanometers) to 25µm (microns), the measuring range of 0 to 30.000partículas / 50.000partículas m <sup>3</sup> / m <sup>3</sup> with temperatures of exhaust gas between 600 and 1000 ° C and exhaust pressure of $\pm 200$ to 2.000mbar, a sampling rate of 5 liters / min (diluted sample) and 4 to 7 liters / min (crude sample).	Camex Resolution	51

9027.10.00	110	Portable equipment for O2 analysis by paramagnetic sensor technology, with a time of about 10 seconds to 10psig inlet pressure response, accuracy of 0.1%, two adjustable alarms, analysis range from 0 to 100% oxygen, with carrying handle and configurable RS232 port.	Camex Resolution	51
9027.10.00	111	or solvent resistant; with response time 4-8 seconds; precision <0.2% of reading or 0.05% O2 whichever is greater; linearity <0.05% O2; reading repeatability 0.1% or 0.05% O2 whichever is greater; 4-20mA communication.	Camex Resolution	51
9027.10.00	112	leak detection equipment compatible with helium gas, to leak detection rate up to 1 x 10 <sup>-7</sup> mbar l / s, sensor response time of 450ms, measuring range of 5 decades, including reaction time line 0,7ms and probe under operating temperature between 10 and 45 ° C, applied to heat exchangers tightness tests, provided by microprocessor control, liquid crystal display and detection gun with LED lights on the sensor tip.	Camex Resolution	51
9027.30.19	12	MRI superconducting magnet Espetrômetros with 400MHz frequency, analyzes for solid and / or liquid in the console for control and generation of radio frequency, temperature controller, microcomputer and "software" Specific processing for analysis and data acquisition.	Camex Resolution	51
9027.30.19	22	Spectrometers near infrared (NIR with optical radiation IV)) by Fourier transform interferometer, permanently aligned insensitive to vibration and high stability for the analysis of solid samples or pasty with cube corner mirrors and bearing without friction, beam splitter in quartz substrate; measuring speed up to 5varreduras / second at a resolution of 8 cm <sup>-1</sup> ; resolution of 2 cm <sup>-1</sup> ; wavenumber reproducibility better than 0,04cm <sup>-1</sup> ; wavenumber accuracy better than 0.1 cm <sup>-1</sup> ; T precision photometric 0.1%; housing with: robust, compact, sealed and desiccated optics; Laser Class 1; beam splitter quartz substrate with proprietary coating; mechanical scanner with frictionless bearing 4 and speeds mirrors; detector for high sensitivity PBS with non-linearity correction; InGaAs and PbS detectors and internal validation unit for Performance Qualification (PQ); rotation system for sampling cups; software spectroscopic control with specific packages for control and quality assurance (QC / QA) and quantitative analysis.	Camex Resolution	51
9027.30.20	45	ultraviolet spectrophotometer, stainless steel, technology fourth beams (two reference channels and two measurement channels) with a wavelength range 380 to 780nm for color measurement "in-line" in the extruder, at high temperatures up to 400 ° C, in the production of blown rubber.	Camex Resolution	51
9027.30.20	46	Equipment for measuring the reflection of ophthalmic lenses, provided clamping the tower of the lenses (samples) spectrophotometer with lamps for light emission in the visible and / or ultraviolet and calculation software with the range spectral range 380 to 780nm (expandable to 800nm) beam size at the measurement point with a diameter of 2 nm, spectrum acquisition time of 2 to 3 seconds.	Camex Resolution	51
9027.50.20	3	pH, leukocytes, glucose, etc.), by reflectance photometry with built-in printer.	Camex Resolution	51
9027.50.20	10	Machines for laboratory testing human serum by means of photometry with chemiluminescence technology and magnetic microparticles, samples provided charger, charger reagents, reaction module incubator and wash station reading chamber.	Camex Resolution	51
9027.50.20	44	and computerized automated analyzer for conducting biochemical assays of urine per reflectance through reflection photometer and mythology.	Camex Resolution	51
9027.50.20	61	Automated systems designed to perform the preparation of nucleic acid samples using general purpose reagent and an automated fluid management platform, with a processing capacity of up to 96 samples simultaneously.	Camex Resolution	51

9027.50.90	2	computerized analyzer to diagnose hemostatic disorders with four test channels for differential diagnosis and detection system ópticomecânico.	Camex Resolution	51
9027.50.90	64	fotocolorimetria, kinetics, turbidimetry and potentiometry with CTI technology for the determination of electrolytes (sodium, potassium and chlorine), with a processing speed equal to or greater than 400testes photometric / h or 600testes electrolyte ( ISE) / h, or exceeding 800testes / h when carried out simultaneously accompanied by "rack" of multiple samples 5 positions.	Camex Resolution	51
9027.50.90	111	Automatic analyzers and computerized for molecular clinical diagnosis from the amplified nucleic acids (DNA / RNA) of infectious diseases, genetic screening, drug, and genetic markers for genetic predispositions by assays "multiplex" method "microarray" electronic excitedly at 626 nm and emission at 668nm red light and 525nm excitation at 553 nm and emission of green light; 3 optical filters (green, red and neutral); CCD camera built.	Camex Resolution	51
9027.50.90	112	Automatic analyzers for hemostasis assays of coagulation tests, chromogenic and immunoturbidimetric via photometric measurement by two photo-optical channels having wavelengths of 405, 570 and 740nm, capacity up 100testes / h 58testes / h in mixed mode, equipped with extender module and dispensing valve, automatic pipetter with capacitive detection level heated to 37 ° C, 22 samples divided in two positions "racks" and system "rinse" for cleaning the pipettor.	Camex Resolution	51
9027.50.90	113	Analyzers for the determination of the basic parameters of the second stage of hemostasis in coagulation and immunoturbidimetric test using photometric measurement by single-channel photo-optic with a wavelength of 400nm and variable pulse modulation, provided the incubation block for 8 samples and second cavities reagent, heated to 37 ° C.	Camex Resolution	51
9027.50.90	114	Automatic analyzers for measuring the erythrocyte sedimentation rate (EST) of the blood sample anticoagulated with EDTA and reading processing directly on the primary tube without sample aspiration, optical analysis method photodiode; free of solid and liquid waste; measurement range: 0 to > 140 mm / hr; minimum sample volume: 1.5 ml; maximum sample volume: 4 ml; It works with pairs of optical-electronic elements (photodiode and phototransistor); working temperature of 15 to 35 ° C.	Camex Resolution	51
9027.50.90	115	automated coagulation analyzer with multiple forms of measurement based on mechanical way, chromogenic and immunoturbidimetric.	Camex Resolution	51
9027.80.20	42	Mass spectrometers detectors with dual source with orthogonal geometry, single quadrupole analyzer High resolution mass range of 30 to 1.250m / z and photomultiplier detector.	Camex Resolution	51
9027.80.20	52	between 41 and 500amu, mass analyzer "Ion Trap Toroidal" heated between 100 and 180 ° C with better resolution than the unit for the mass range between 41 and 300amu mass and rated to 500 with integrated housing for use helium cylinder column for direct contact with resistive heating for heating ramps 150 ° C / min and double stage vacuum system diaphragm pump and turbomolecular.	Camex Resolution	51
9027.80.99	22	Apparatus for automatic blood cell count with determination of red cells, platelets and white blood cells (neutrophils, lymphocytes medium and cells).	Camex Resolution	51
9027.80.99	51	fully automated hematology analyzer for counting and differentiation of blood cell analysis with up to 26 parameters with the DHSS technology (Hydrodynamic System Sequential Double) combining cytochemical, and impedance and multiple flow cytometry sample distribution system (MDSS).	Camex Resolution	51
9027.80.99	52	fully automated hematology analyzer for counting and differentiation of blood cell analysis with up to 18 parameters impedance and photometry method using sample volume of 10µl per test.	Camex Resolution	51

9027.80.99	55	automatic blood cell counting apparatus for analysis with sequential dual hydrodynamic system (DHSS) for measuring cell volume, and content analysis in a single stream.	Camex Resolution	51
9027.80.99	78	and computerized automated analyzers random access hemostasis, capable of performing simultaneous two methodologies, and optical reading machine readable pattern and gold called "Ball Method".	Camex Resolution	51
9027.80.99	91	and computerized automated urinalysis analyzers capable of performing urine sediment testing by microscopy.	Camex Resolution	51
9027.80.99	95	particle size analyzer (granulômetros) for dust and / or suspensions by laser diffraction or light scattering and / or zeta potential measurement jointly or separately, with ranges from 0.2 to 500 microns or 0.04 500 microns or 0.04 to 2500 microns or from 0.005 to 1000 micron or 1 nm to 6 microns or 2 to 6 nanometers to 10 nanometers microns to 6 microns.	Camex Resolution	51
9027.80.99	108	histograms - leukocytes, erythrocytes and platelets), powered by electronic impedance, spectrophotometric absorption electronic valve, using a free lysing reagent method cyanide, speed up 60 amostras / h, with volume 9,8µl, equipped with color LCD monitor with screen type "touch screen" and barcode reader.	Camex Resolution	51
9027.80.99	109	"MAPSS" (Multi-Angle Scattering and separation of polarized light) whose analysis generates up to 12 analysis charts of the cell population (WBC, RBC, platelets and reticulocytes), capable of differential analysis of 84 amostras/he storage 10,000 results with graphics, equipped with screen type "touch screen".	Camex Resolution	51
9027.80.99	139	Portable apparatus for measuring glucose levels (D-glucose), B-ketone (B-hydroxybutyrate) in the blood by means of electrochemical processes (FP) in test strips that use GDH-NAD enzyme (enzyme glucose dehydrogenase), consisting of barcode reader with alphanumeric keyboard and built-in monitoring display.	Camex Resolution	51
9027.80.99	209	beverages in general, to calculate pasteurisation units in range = <9999,9UPs, temperature ranges from 0 to 105 ° C, 1 and / or second temperature readings and / or pressure reading option, complete with typical operating belongings.	Camex Resolution	51
9027.80.99	217	immunodiagnostic blood analyzers with amplified chemiluminescence detection technology and detection of endogenous in the sample, with the quality of the results achieved, computerized, with controls of the functions of the "touch screen" and managed by dedicated program.	Camex Resolution	51
9027.80.99	238	probe electronic modules lambda oxygen sensor for measuring / acquisition and central calibration of electronic injection in vehicle systems.	Camex Resolution	51
9027.80.99	304	hematology analyzers with 60 amostras/hora performance, manual and automatic calibration, WBC differentiation into 3 parts, level sensor for reagents, samples with 50,000 histogram memory; 2 counting channels, impedance for WBC, RBC and PLT, colorimetry for hemoglobin; Automatic cleaning of the aspirating needle.	Camex Resolution	51
9027.80.99	305	Equipment for direct measurement with ion-selective electrode (ISE) membranes without changing the maximum capacity of 60 amostras/hora for determination of electrolytes to 5 among sodium, potassium, ionized calcium, chloride, lithium, and pH, in primary serum samples, plasma and whole blood, or may not be measured in dilute urine secondary samples.	Camex Resolution	51
9027.80.99	306	Bench automatic apparatus for blood cell counting and hemoglobin measurement contained in red blood cells using the "Coulter" with equal processing the 60 testes / h, determination of 26 parameters from a sample of 110µL of whole blood and the ability to memory to 100,000 results, including histograms.	Camex Resolution	51

9027.80.99	307	measurement contained in red blood cells using the "Coulter", with greater than or equal to 30 amostras/h processing, determining maximum of 22 parameters from the whole blood sample 25µL 50mL and the normal mode in the pre-dilution mode and memory capacity to 10,000 results, including histograms.	Camex Resolution	51
9030.33.90	11	of 5kV 69kV and maximum, current monitoring with accuracy of +/- 1% to 600A, operating at 50 or 60 Hz nominal frequency, ability to endure currents up to 25kA 10 cycles, integrated cellular modem with an output of 2W for communication "penta-band" via 3G / 4G, without section on the line installation, with monitoring type SCADA system via the communication protocol DNP3 level 2 charged internal battery via integrated current transformer and local monitoring via two multi-color LEDs.	Camex Resolution	51
9030.33.90	12	operating facilities 42 provided with metal oxide varistors with a nominal voltage (Ur) of 128kV, continuous operating voltage (Uc) 89kV, energy absorption capacity and the rated current 9.050kJ of 65kA, flushing with three arresters trigger controlled ( "MAC TAG") for quick protection of the capacitive reactance and varistors by diverting current controlled trigger voltage ( "flashover voltage forced triggering") equal to or greater than 300kV peak , rated short circuit current exceeding 40kArms / 0,25s, isolation level exceeding 6.500kV peak current switching device isolated SF6 gas, nominal voltage to earth rated voltage of 550kV and 145kV pole, level of insulation to earth 1.550kV peak current and the nominal current of 4.000A closure exceeding 110kA peak voltage reinsertion not less than 300kV, the spring operating mechanism, and the link connecting the platform to the ground through sixth signals to columns (two per phase), rated voltage of 550kV, flow distance of 11.000mm, the amount of optical fiber greater than or equal to 12 units	Camex Resolution	51
9030.89.90	8	machines for testing and selection of capacitors, with maximum operating speed greater than or equal to 80 units per minute.	Camex Resolution	50
9031.10.00	95	Machines for balancing crankshafts, with PLC controlled via measurement command that allows automatic correction cycle using a special algorithm for optimizing mass removal, maximum diameter of 250mm of rotation, with a maximum length of 1,000 mm balancing speed between 250 and 1500 rpm equipped with the lubrication system of the cutting edge of the tool MQL type ( 'minimum quantity lubrication') and measurement uncertainty at most 1g.cm, mat and 2 to 20 parts cocks manipulation.	Camex Resolution	51
9031.20.10	19	Seats for testing of mechanical and electronic components of the motor pulled by an electric motor, endowed structure handling groups motorized transmission approximation group the automatic connection plate, sealing robot system side suction and side discharge torque measuring system temperature control system and oil pressure system pressure manifold inlet and outlet per cylinder, engine timing system (CCT), VVT test system, a system for ignition testing system for testing of nozzles, detection system NVH and noise protection cabin, designed for smaller arrangements 78dbA with rotating motor of 3,000 rpm, access doors with security key type "Euchner" complete fluidic installation, turntable with 2 positions (0-180 °) carrier "fly roller" with turntable and monitoring computer controlled.	Camex Resolution	51



9031.20.10	21	Seats for cold sealing test of the water galleries and motor oil, provided with computerized numerical controls (CNC), the base structure and upper elevator with "moby" blocking groups, reaction groups, completely flexible sealing system in 3 axes X, Y, Z, sealing component "Blow By" system, the oil pipe system side head sealing system suction and intake manifold thermostat sealing system, the system seal crankshaft, sealing system device "Profinet" full of accessories and relative calibration and programming, station device "leak", pallet master, complete reference pallet-specific caps, calibrated leaks, transponder, PLC transport interface, dedicated software for data collection and management for statistical analysis, production and disposal monitoring reports on the server.	Camex Resolution	51
9031.20.90	136	two bi-axial tables using signals collected in the field and playback from vibration table with 6 degrees of freedom, two points of bi-axial tests and "software" with ability to generate inverse transfer function and signal interaction.	Camex Resolution	51
9031.20.90	137	Machines for the automotive suspension flexibility test and vehicle behavior on the road, with simulated braking scenarios, acceleration and drive curves of the vehicle, to make wheel position measuring highly accurate consisting X actuators, Y and Delta in the application lateral force, and longitudinal direction, computerized control system and electrical cabinet with programmable logic control (PLC).	Camex Resolution	51
9031.20.90	138	Testbeds for functional testing of diesel electronic injectors for fuel injection systems high pressure of the "Common Rail" with specific electronic measurement discharge, return, coil resistance, response time, injection flow and temperature, 2.000bar with pressure until, configured to test and generating C2I and C3I coding for up to 4 injectors simultaneously endowed printer coding unit, kit test device and mounting adapters, pneumatic coupling system with pressurizing return line negative and controlled by programmable logic controller.	Camex Resolution	51
9031.20.90	139	speed performance, durability and verification of automotive bumpers characteristics, with $\pm 3.500$ lbs capacity, vertical displacement of 15 to 150mm and test speed of 2m / s, the frequency actuator electrodynamic 0,05Hz variable up to 7.3 Hz, equipped with position sensor (encoder) of 720pulsos / revolution, computer-controlled with dedicated software to analyze and control tests.	Camex Resolution	51
9031.20.90	157	Tops regular output shafts and functional test of the cross-servo Table 3 stages, for height adjustment of the output shaft, working tolerance between -0,15mm to + 0.35 mm, rated speed controlled by gland systems 250mm / sec with a nominal load of 60 / 60kN, stroke 350mm, 1.000mm acceleration / s <sup>2</sup> and residence time of the rated power at least 4s, servomotor, pneumatic system, 2D label reading system, load cell, linear transducers, control valves and pressure sensors, vacuum system (vacuum) in the presence of component sensors, computer monitor, "software" / PLC and device for mounting accessories for the product within families 9, 10 and 11 ".	Camex Resolution	51
9031.49.90	53	industrial endoscopy equipment, microprocessor, with a maximum length of 40m and a maximum outer diameter of 18mm.	Camex Resolution	51
9031.49.90	70	Appliances with automatic optical system for classification and quality inspection, structure and tone tile, computerized, with detection and identification of defects through tele-cameras.	Camex Resolution	51
9031.49.90	140	dimensional measuring devices to ceramic plates, with control capability in the same formats or greater than 10 x 10cm, accuracy of +/- 0.1 mm and the possibility to integrate into planarity system.	Camex Resolution	51

9031.49.90	169	Machines for inspecting defects in glass bottles with a capacity of inspection 600garrafas / minute, and can inspect base base voltage, mouth finish and reading the number of mold.	Camex Resolution	51
9031.49.90	210	Devices for automatic verification of the diopter, with marking and position of the optical center and cross curve axis ophthalmic lenses through optical process, with measurements up to +/- 25 diopters spherical and cylindrical diopter +/- 10.00 to maximum diameter of 100mm lens.	Camex Resolution	51
9031.49.90	219	the optical center and cross curve axis of ophthalmic lenses, by optical process, with measurements up to +25 diopters for the lens diameter of 24 to 90mm.	Camex Resolution	51
9031.49.90	280	scanning function with laser beam of high power and high speed for monitoring dynamic optical sensors and measuring static optical sensors for high resolution, up to 16 input channels, identifying maximum of 25 or 60 optical FBG sensors per channel wave length range comprised between 1.460 to 1.620nm (including limits), having optical connectors type FC / APC or LC / APC.	Camex Resolution	51
9031.49.90	339	optical systems to inspect the print quality for continuous processes, machines fed by coils for 100% inspection of printed material, with automatic detection from 0,031mm <sup>2</sup> print defects, color monitoring via the L * A * B and sensing color variation from 0.1 delta E (delta E = the total color difference) monitoring the variation of the printing registration from print step 0,031mm <sup>2</sup> and monitoring from 0.01mm with 1, 2 or 3 line scan cameras with CMOS (complementary metal-oxide semiconductor) at maximum bandwidth of 3500mm and a maximum speed of 1,000 m / min.	Camex Resolution	51
9031.49.90	340	Apparatus "scanners" 4 sensors for measuring the stride length of twisted pair cables to pass length between 6.35 and 25.4mm, with monitoring of changes in stride length for contactless optical measurement in speed, between 7.62 and 152,4m / min, reading accuracy with 0.025 mm, equipped with "display" and "software" of communication.	Camex Resolution	51
9031.49.90	341	Machines for inspection "blanks" used in the manufacture of coins, for "blanks" with diameters between 10 and 35mm and thickness 0.8 to 4.0mm, with a capacity of 1.500 "blanks" per minute (operating with a line) and 3.000 "blanks" per minute (operating with two lines).	Camex Resolution	51
9031.49.90	342	Equipment for observation and optical inspection moving web, in print formats, with digital device, camera with 5MP resolution, vision margin of 120 x 90mm and maximum speed band of 1,000 m / min.	Camex Resolution	51
9031.49.90	343	materials on paper, transparent plastic films, white and metallized and holographic images, to identify print defects and eventual correction as a control winding and defects tensions with differential shaft for independent voltage control for each roll on the winder with antistatic bar, with tension control system, with U-turn system controlled by programmable logic control (PLC) with man-machine logic interface (HMI) "touch screen" with a camera band alignment system, with retro inspection system, with a maximum width coil equal to 440mm, maximum diameter of 700mm input coil, top speed of coiling equal to 320m / min, with video equipment inspection, endowed by Color video camera type digital, high definition (4K) and high speed.	Camex Resolution	51
9031.49.90	344	components on printed circuit boards to post process "reflow" with resolution of 0,18µm to panels of 460 x 500mm with LED lighting and camera.	Camex Resolution	51

9031.80.11	8	Dynamometers for static and dynamic evaluation of internal and hybrid combustion engines for use in vehicles, fitted with asynchronous motor, able to carry out the survey of stationary load profiles and transient of legislative emission cycles of functional pollutants and tests with simulation vehicles and drivers, with a power of 700kW, 3.800Nm rated torque, maximum rotation 4.500rpm, 4,48kgm <sup>2</sup> mass inertia of the engine, and 1.759rpm nominal speed gradient of 9,7rpm / s.	Camex Resolution	51
9031.80.20	168	components, provided with: two separate operating stations, double robots equipped with eight axes kinematic each, six orbital movements, one horizontal displacement and one vertical sensor measuring two megapixel cameras 16 and 21 megapixel sensor photogrammetry, 1 capacity area for parts up to 6 x 2,5metros and another area controlled rotary table "software" parts of up to 3 meters in diameter, maximum weight part of 2,000 kg, 2 control consoles.	Camex Resolution	51
9031.80.20	169	carbon fiber portable articulated arms for manual measurements pieces with dimensions of coordinates from the X, Y and Z 1,000 x 1,000 x 1,000 mm with tips kit, "encoders" absolute, external counterbalance and "smart lock".	Camex Resolution	51
9031.80.99	28	Apparatus for non-destructive testing by means of ultrasound, microprocessor, for detecting flaws in metal parts, with a measuring range from 0 to 15,000mm, speed range between 635 and 20,000m / s and measuring frequency range 0 02 to 100MHz.	Camex Resolution	51
9031.80.99	29	Apparatus for non-destructive testing by means of ultrasound, microprocessor-based, portable for thickness measurement, ultrasonic or sonic speed speed-thick metal parts, the measuring range of 0.01 to 500mm.	Camex Resolution	51
9031.80.99	144	Apparatus for non-destructive testing by means of ultrasound, microprocessor, for detecting flaws in metal parts at any measuring range between 2.5 and 15,000mm, speed of sound between 100 and 20,000m / frequency transducer is comprised between 0.025 and 100MHz.	Camex Resolution	51
9031.80.99	292	Equipment for anti-reflective adhesion test ophthalmic lenses, by applying a force of 60N, automated, with a cycle counter, a holder for the lens and an adjustable arm supporting a disposable rubber.	Camex Resolution	51
9031.80.99	407	Microprocessor Equipment for non-destructive testing by the method of eddy currents, to detect cracks and other surface discontinuities in ferromagnetic materials or not, with one or more operating channels for use in manual assays or fixed or rotating automatic with one or more probes or coil sensor and upper frequency limit of the minimum 5 MHz operation.	Camex Resolution	51
9031.80.99	427	Target acquisition, management and data analysis, 4 or 8 analog input channels simultaneously, for thermodynamic analysis of engine combustion pressure based on crank angle, pressure-measuring piezoelectric sensor in real time with maximum capacity of 300bar. (Wording given by CAMEX RESOLUTION No. 69 OF 21 AUGUST 2017)	Camex Resolution	51
9031.80.99	486	Process control equipment, with the control function and adjust the weight of the glass gob falling in the sessions of the molding machine hot glass and may be equipped with up to 32 sensors course 8½ and programming and control panels.	Camex Resolution	51
9031.80.99	488	stroke positioning of the measuring equipment in ophthalmic lenses for viewing and location of recordings, supporting lenses with maximum diameter of 85mm camera with 5MP resolution and optics with mobile mirror and steady increase of 1X.	Camex Resolution	51
9031.80.99	495	Readers tracer - apparatus for measuring shape, curvature and depth of trough spectacle frame by means of probes, capable of performing 3D reading frames and 2D for molds and lenses with reader gradient of 0 or 10, provided with interface for one or more chamfering, numerical control.	Camex Resolution	51

9031.80.99	496	stroke positioning of the measuring equipment in ophthalmic lenses for viewing and location of recordings, comprising a support for the lens blocked with INSERT referencing, a camera, optics with mobile mirror, often between 50 and 60Hz, diode infrared light 850nm.	Camex Resolution	51
9031.80.99	598	Apparatus for electrical testing of functional performance (temperature, pressure, vacuum, humidity, vibration) for use in production line of refrigerators, freezers and air conditioning household.	Camex Resolution	51
9031.80.99	600	Readers tracer - apparatus for measuring shape and curvature of eyeglass frames, through probes with automatic calibration and automatic positioning of the probe, equipped with video camera without parallax errors, storage 200 ways barcode, cross centering for all types of lenses: single vision, bifocal, executive and multifocal, with pressure control: breaking protection superfine lenses, networking possibility of up to 15 facetadoras and 3 readers, interface to one or more chamfering, numerical control.	Camex Resolution	51
9031.80.99	607	automatic for measuring uniformity of passenger car tires and light truck machines with minimum outside diameter of 20 inches, maximum outer diameter of 40 inches, minimum bead diameter of 12 inches, maximum bead diameter of 28 inches with input conveyor provided with bead lubrication device docking station, inflation and measurement of the uniformity of tires with or without laser geometry inspection device (TGIS), output conveyor with or without separator (sorter) integrated, with or without tire marking station, with programmable logic control (PLC).	Camex Resolution	51
9031.80.99	716	characteristics of the light intensity for testing combination in automotive headlights and lamps, with automatic positioning of the sample relative to the optical axis, the angular resolution of 0.01 °, horizontal and vertical rotation axes, "servo drives" 3 phases with 16 speeds in both axes "encoder" with angular increment 0.01 ° accuracy in both axes, "" display position of zero optical, maximum dimension capacity of the sample until 1.800 x 800mm, horizontal offset range of ± 200 °, vertical displacement range of ± 100 °, high-speed processing of up to 50 ° / s-axis M, shift range of the x-axis of ± 300mm displacement range of the 200 mm ± Y axis, the displacement range Z-axis of -50 to + 650mm, provided with adjustable motorized table test in 3 directions may be manually controlled by remote control or by computer with the resolution of 0.1 mm, serving samples with a maximum load of 80kg (nominal weight 50kg), as laser embedded alignment, horizontal mounting table 500 x 500mm, 10 channel multiplexer installed directly on the test table, switching between light sources also	Camex Resolution	51
9031.80.99	825	Measuring instruments and control range, with automatic adjustment of film thickness on polyethylene balloon production line 8 to 300µ (microns).	Camex Resolution	51
9031.80.99	826	Modules for measuring / acquisition of analog signals from sensors in motor vehicles, with at 100kHz signal samples in 4 independent channels and connection of sensors measuring transducers via standardized interface.	Camex Resolution	51
9031.80.99	827	Machine for sealing containers PET test (ethylene terephthalate) having a maximum belt speed of 1.5 m / s carrier, maximum production capacity greater than or equal to 16.500recipientes / h (high density polyethylene containers with a volume of 1000 ml) for containers with a diameter between 40 and 170mm, height between 100 and 350mm, with a level detector and discarding system according containers.	Camex Resolution	51
9031.80.99	828	Systems for thickness measurement, humidity, weight, plastic films, plastic, abrasives, non-woven, and rubber, for process control with radioactive sensors and non-radioactive, infrared, by contact and non-contact, using one or more " scanners ", operator interface, server and control interface, with scan rate of up to 400mm / s (15,6pol / s).	Camex Resolution	51

9031.80.99	829	artificial vision systems for inspection of defects in paper and pulp, at room temperature at 10 ° C to 50 ° C, provided with one or more CCD or CMOS cameras, resolution of at least 1 x 2.048pixels focal length 35mm least 350mm display area and minimum illumination of at least 300W / m of steel beams apart from power input 400 to 600VAC, 3-phase, ± 10%.	Camex Resolution	51
9031.80.99	830	anthropomorphic puppets "dummies", used in automobile crash tests against fixed and mobile barriers in testing laboratories, manufactured in aluminum and plastic frame, equipped with instrumentation and electronic components for connecting data acquisition equipment.	Camex Resolution	51
9031.80.99	831	improved dynamic accuracy, high rate data output (200Hz) by angular orientation range of +/- 25, acceleration sensors with range (all axes) +/- 50m / s <sup>2</sup> resolution of 14bits, 24 digital output variables, RS 232 and RS 422 with power requirements 10 to 36VDC, max 3W, used for compensation multibeam echo sounders movements damping system movements in high-speed vessels and structural monitoring platforms "offshore" and large vessels.	Camex Resolution	51
9031.80.99	832	Apparatus pressurizers bottles, for subsequent detection and control of leakage by means of ultrasonic excitation, operating in beverage filling lines, the power of 1000W and lower inspection speed or equal to 1m / s.	Camex Resolution	51
9031.80.99	833	workstations for measurement and calibration diameter, notches and holes depth and depth struts bushing for automotive engines.	Camex Resolution	51
9031.80.99	834	Workstations for measuring and calibrating the thickness of the crank pin and face, flatness and symmetry of connecting rods for automobile engines.	Camex Resolution	51
9031.80.99	835	Workstations for measuring and calibrating the thickness, height and profile of the face and the pin diameter and position of the crank rods hole for automotive engines.	Camex Resolution	51
9031.80.99	836	workstations for measurement and calibration bending, twisting, diameter, position, dynamic bending of the crank bore rods for automotive vehicles.	Camex Resolution	51
9032.89.29	43	electronic control units (ECU) for managing multiple functions of agricultural machinery and implements through specific software, weighing less than 0.9kg, containing printed circuit board mounted with electronic components protected against moisture and dust, with capacity connections with other electronic modules via USB, and CAN protocols NMEA 2000, ISO 11783, J1939, supply voltage of 9 to 36V, IP67, operating temperature of -40 to + 80 ° C and by approved EP455.	Camex Resolution	50
9032.89.30	1	control units and automatic management system composed train of IP switch, vehicle control unit (VCU), 400MHz, with detachable plug device mounted on the front of the unit, with electronic identification mark, dimension 200.2 - 224 by 172 - 182 x 126.5 - 163,5mm, unit "display" with the conductor size 259-275 x 197-212 x 51 - 90mm, network repeater multifunctional vehicle bus (MVB) with 6 points MVB connection and a power connection with dimension 60 - 70 x 195-205 x 120 - 130mm, digital and analog modules, simple IP and MVB communication.	Camex Resolution	50

9032.89.30	4	acceleration and braking, able to control the train with locomotives distributed in multiple remote sets, synchronous or asynchronous mode, placing remote locomotives empty, aimed at reducing domestic efforts train and the reduction of fuel consumption, with a structure containing eight connectors for peripheral modules, power supply source and equipped with an electronic module high-performance processor (HPEAP) containing a quad-core processor (QuadraCore) of frequency higher than 1GHz , two Ethernet ports, key connection Gigabit "backplane", light-emitting diodes ("LEDs") module using indicators and program, two serial ports with 8 digital inputs and outputs, RAM with storage capacity equal to or greater 4GB and the SSD memory exceeding 256 GB storage capacity; electronics module wireless communication (WCM2) consists of a "modem" cellular communication with dual SIM, WiFi network access including dual access point WiFi "hotspot", GPS and Ethernet ports; and specific program installed for the automatic control of acceleration, braking and power	Camex Resolution	50
9032.89.82	6	control of electrical power in the hot runner heating elements of plastic injection mold, provided with: color LCD screen, "touchscreen" with man machine interface (HMI) control module 60 or 96 sensorial areas of the mold enclosure with power supply and processing power and plates; nominal electrical output 16A of heating per zone; with tuning method for active reasoning technology (ART); 0.5 ° C accuracy for measuring range between 0 and 500 ° C.	Camex Resolution	50
9032.89.89	13	Apparatus for regulating and automatic control of environmental parameters incubators eggs and hatchers, by continuously monitoring and simultaneous closed loop PID technology (Proportional-Integral-Derivative), the global internal contents of CO2 (carbon dioxide) and humidity and temperature parameters consisting of: own vertical panel for mounting in incubators and hatchers with inspection window; man-machine interface with capacitive touch screen and / or wireless remote control; control unit with "firmware" dedicated; Electronic sensors CO2, relative humidity and temperature, NTC, and infrared, and birth synchronization sensor device.	Camex Resolution	50