

## Technical Specifications

### Recovery and Recycling Equipment and Sets of Tools for refrigeration technicians

Items to be Supplied	Quantity, piece	Description / Specifications of Goods	Latest Delivery Date
1.	2	<b>REFRIGERANTS RECYCLING AND RECOVERY UNIT</b> <ul style="list-style-type: none"> <li>Power from 350 to 500 w;</li> <li>Type of refrigerants: HCFC and HFC;</li> <li>Portable, the maximum weight is not less than 80 kg;</li> <li>Recycling (productivity): gas 10 ÷ 15 kg/h;</li> <li>fluid 80 ÷ 120 kg/h;</li> <li>Voltage: 220 v; 50 Hz;</li> <li>current consumption phase ~1;</li> <li>Oil less compressor with cooling fan of condenser and built-in vacuum pump - 0.05 mbar;</li> <li>Measuring devices, embedded in equipment;</li> <li>Automatic high pressure safety switch;</li> <li>Overfill protection (OFP) switch;</li> <li>Automatic extraction;</li> <li>Casing: fully enclosed durable chassis on wheels;</li> </ul> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	60 calendar days upon signature of contract
2.	2	<b>SPARE KITS FOR REFRIGERANTS RECOVERY UNIT</b> <ul style="list-style-type: none"> <li>Replaceable filters – 10 pieces for 1 unit;</li> <li>Kit of three standard (long) service hoses with spherical gates for unit (1 kit);</li> <li>Spare manometer (1 piece);</li> <li>Viewing control glass with standard connection (1 piece);</li> <li>Other spare parts at the discretion of the supplier which can be necessary for operation of the unit during 1 year.</li> </ul>	60 calendar days upon signature of contract
3.	2	<b>PORTABLE CHARGING STATION (HC)</b> <ul style="list-style-type: none"> <li>Vacuum pump up to 35 Liter/min;</li> <li>Electronic scale range from 0 to 2000 g;</li> <li>Accuracy from 0 to 2 g;</li> <li>Refrigerant cylinder with valve;</li> <li>Vacuum gauge from 60 to 80 mm diameter;</li> <li>At least one LP gauge for R-134a, R-12, R-22 and one LP gauge for R-600a,</li> <li>Necessary charging hoses including one special hose of not less than 5 meter length in order to prevent any R600a gas (Isobutan) in the working area;</li> </ul> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	60 calendar days upon signature of contract
4.	2	<b>SPARE KITS FOR PORTABLE CHARGING STATION (HC)</b> <ul style="list-style-type: none"> <li>Replaceable filters – 10 pieces per 1 unit;</li> <li>Kit of three standard (long) service hoses with spherical gates for unit (1 kit);</li> <li>Spare manometer (1 piece);</li> <li>Viewing control glass with standard connection (1 piece);</li> </ul>	60 calendar days upon signature of contract

		<ul style="list-style-type: none"> <li>Other spare parts at the discretion of the supplier which can be necessary for uninterrupted operation of the station during 1 year.</li> </ul>	
5.	2	<b>PORTABLE RECOVERY STATION</b> <ul style="list-style-type: none"> <li>Vapour rate: up to max. 22 kg/h;</li> <li>Liquid rate: up to 138 kg/h</li> <li>Push-pull up to max. 378 kg/h;</li> <li>Allows for recovery of HCFC or HFC, including blends, such as R404a and R410a;</li> <li>Portable, the maximum weight is no more than 15 kg;</li> <li>Completely closed strong casing;</li> </ul> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	60 calendar days upon signature of contract
6.	2	<b>SPARE KITS FOR PORTABLE RECOVERY STATION</b> <ul style="list-style-type: none"> <li>Replaceable filters – 10 kits per 1 piece;</li> <li>Kit of three standard (long) service hoses with spherical gates for unit (1 kit);</li> <li>Spare manometer (1 piece);</li> <li>Viewing control glass with standard connection (1 piece);</li> <li>Other spare parts at the discretion of the supplier which can be necessary for operation of the unit during 1 year.</li> </ul>	60 calendar days upon signature of contract
7.	1	<b>HEAT PUMP CO2</b> <ul style="list-style-type: none"> <li>Water Temperature Setting: min. 60.....65°C; max. 85...90°C</li> <li>Type of heat pump: Air-Water</li> <li>Ambient Air Operating Temperature: -20....45°C</li> <li>Heat Pump Capacity: 4,0 – 5,0 kW</li> <li>Heat Pump COP: 4,0 – 5,0</li> <li>Refrigerant Type: R744 (CO<sub>2</sub>)</li> <li>Compressor Type: Invertor</li> <li>Power voltage: 220 V / 50 Hz</li> <li>Storage tank volume: 200...250 L.</li> </ul> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	60 calendar days upon signature of contract
8.	4	<b>MULTI-REFRIGERANT ANALYZER</b> <ul style="list-style-type: none"> <li>For refrigerants HCFCs, HFCs and hydrocarbons (HC); - R-134a, R-22, R-404A, R-407C and R-410A and natural refrigerants as well</li> <li>Accuracy: +/- 2% of indicated gasses or better;</li> <li>Weight: Less than 10 lb;</li> <li>Temperature range from 50 to 110° F;</li> <li>Response time: Less than 3 Minutes;</li> <li>Humidity: from 0 to 95% RH non-condensing;</li> <li>Test sample size: not more than 5g per test;</li> <li>Test pressure: from 50 psi to 500 psi;</li> <li>A built-in USB port for additional refrigerants;</li> </ul> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	60 calendar days upon signature of contract
9.	4	<b>SPARE KITS FOR MULTI-REFRIGERANT ANALYZER</b> <ul style="list-style-type: none"> <li>5 sets of filters;</li> <li>5 rolls of printer paper.</li> </ul>	60 calendar days upon signature of contract
10.	2	<b>PORTABLE SOLDERING UNIT</b> <ul style="list-style-type: none"> <li>For iron, steel, tin, and nonferrous metals with brazing alloy;</li> <li>Powered by gas-oxygen;</li> <li>Flame temperature not less than 2830 °C;</li> </ul>	60 calendar days upon signature of contract

		<ul style="list-style-type: none"> <li>Weight not more than 25 kg;</li> </ul> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	
11.	2	<p><b>PORTABLE ELECTRONIC WEIGHING SCALES</b></p> <ul style="list-style-type: none"> <li>Capacity not less than 100 kg;</li> <li>Resolution up to 10 g;</li> <li>Accuracy <math>\pm 0.1\%</math>;</li> </ul> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	60 calendar days upon signature of contract
12.	2	<p><b>DIGITAL VACUUM GAUGE</b></p> <ul style="list-style-type: none"> <li>Vacuum Range from 0 to 18000 microns;</li> <li>Resolution not less than 1 Micron;</li> <li>Not less than 7 units: Micron, PSI, InHg, mbar, Pascal, Torr, mTorr, Hook;</li> <li>Cleaning port for cleaning of sensor;</li> <li>Accuracy <math>\pm 10\%</math> from 10–99 micron, <math>\pm 10</math> micron from 100–1000 micron;</li> <li>Overpressure up to 20 bar;</li> </ul> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	60 calendar days upon signature of contract
13.	2	<p><b>INFRARED REFRIGERANT LEAK DETECTOR</b></p> <ul style="list-style-type: none"> <li>Three sensitivity levels down to 0.15 oz./year;</li> <li>Automatically recalibrates in highly contaminated areas to help pinpoint exact location of leak;</li> <li>Won't trigger on oil or moisture;</li> <li>Senses at least CFC, HFC, HCFC blends and HFO-1234yf refrigerants;</li> <li>Visual alert and peak button make it easy to find leaks in noisy environments;</li> <li>Audible alert with mute button.</li> </ul> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	60 calendar days upon signature of contract)
14	8	<p><b>ELECTRONIC LEAK DETECTOR</b></p> <ul style="list-style-type: none"> <li>Sensitivity: 0.05 oz/yr;</li> <li>Can sense at least all HFC, refrigerants and blends including HFC's R410A, R404A, R407C, R134a &amp; R32.</li> <li>Sensitivity Levels: MAX- 0.15oz/yr (4 g/yr), MED- 0.25oz/yr (7 g/yr ), MIN- 0.5 oz/yr (14 g/yr);</li> <li>Warm-up time: approx. 30 seconds;</li> <li>Response time: instantaneous;</li> </ul> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	60 calendar days upon signature of contract
15.	2	<p><b>AMMONIA LEAK DETECTOR</b></p> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	60 calendar days upon signature of contract
16.	2	<p><b>LEAK DETECTOR OF METHANE AND PROPANE</b></p> <p>OPERATIONS MANUAL: in Russian or English; WARRANTY: not less than 2 (two) years from the date of delivery of the equipment.</p>	60 calendar days upon signature of contract
<b>Total:</b>			