

A2L (R32) Compatible Tools



No.	Model	Description	No.	Model	Description
1	NP2DLM	BreakFree Cordless Vacuum Pump, 2CFM	6	NRDD & NRDDF	Digital DC Recovery Unit
2	NP4DLM	BreakFree Cordless Vacuum Pump, 4CFM	7	NRDC4M	4-Cylinder Recovery Unit
3	NP7DP2	Vacuum Pump, 7CFM	8	N2A4A	Manifold Gauge
4	NRP6Di & NRP8Di	Smart Vacuum Pump, Master Series	9	N2D4H	Manifold Gauge with Digital Display, 5 Hoses
5	NP12DM	Vacuum Pump, Industrial Grade, Master Series	10	NKS1	Advanced Mini-Split Tool Kit



Empowering you to work smarter



ASHRAE Standard 34 designates every refrigerant with a letter (A or B) and number (1, 2/2L, 3) to classify its toxicity and flammability. The letter represents the refrigerant's toxicity, with "A" representing low toxicity and "B" for high. The number refers to the refrigerant's flammability. A Class 1 refrigerant is a refrigerant with little to no flame propagation and a low risk of igniting under normal circumstances. Class 3 refrigerants indicate our most flammable refrigerants. ASHRAE recently added the subclass of 2L to represent Class 2 refrigerants that are significantly slower to ignite or burn than other Class 2 gases. When a substance is exposed to spark or flame, many people assume it will behave like water or gasoline. In reality, there's huge grey area in between. It's in this grey area that we find A2L refrigerants. They're much less flammable, but can certainly ignite if several factors align at the same time.

Refrigerant Safety Groups	Lower Toxicity OEL > 400ppm	Higher Toxicity OEL < 400ppm
Higher Flammability	A3 All Hydrocarbons	B3
Lower Flammability HCFs, non-fluorocarbons	A2 R-152a	B2
Lower Flammability Low Burning Velocity HCFs, HFC/HFO Blends, HFOs	A2L R-32, R-452B, R-454B, R-455A, R-516A, R-1234yf, R-134ze	B2L
Little to No Flame Propagation HFCs, HFC/HFO Blends, HFOs, HCFOs, HFO/chloro-olefin blends, non-fluorocarbons	A1 R410A, R-134a, R-744	B1

There is an inverse relationship between Global Warming Potential (GWP) and flammability. As the GWP goes down to acceptable levels, the flammability increases. Today for the residential and light commercial split or unitary markets, the GWP target is 750. The widely used R410A (A1 class) has a GWP of 2088, while R32 (A2L class) has a GWP of 675. Recent data shows that replacing R410A with R32 can help us avoid ~0.9°F of global warming by 2100. That's why we see an impending phasedown of HFCs, including R410A, and the inclusion of R32 or other A2L refrigerants in future equipment. EPA approved A2L refrigerants will bring us closest to being in line with the new GWP targets while having the least overall impact on installation, service and maintenance practices.

R32 and any flammable refrigerants **CANNOT** be used in any R22 or R410A refrigerant retrofit applications. If we look at the equipment coming off the assembly lines manufacturing A2L equipment, they are being designed at the factory to have the components already on board that mitigate the risks of A2L refrigerants, which we call "intrinsically safe". For A2L equipment best practices, always consult the manufacturers' literature before and during an installation for precise standards, requirements and considerations. **Always use tools that are rated for use with A2L refrigerants.**

NAVAC, the world's largest supplier of HVAC vacuum pumps in addition to a wide array of tools, gauges, charging machines, recovery units, and other industry-specific items, is one of the first manufacturers who offer a full line of A2L compatible tools.

